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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE, AND RURAL ECONOMY.

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☞ The severe indisposition of the Editor will, it is hoped, be a sufficient apology for the non-appearance of several communications designed for the last and present number of the Cabinet. They will be attended to in due time.

Second Report of the Agriculture of Massachusetts.

In our last number we acknowledged the receipt of this interesting and important document—and we now hasten to lay before our readers copious extracts, which will, no doubt, afford interest and profit to every intelligent farmer who will carefully peruse them. It was our intention to have accompanied the extracts with observations of our own, but indisposition has prevented the preparation of suitable notices.

The Rev. Henry Colman, a gentleman of science, cultivated taste, education, and with-al a good practical farmer, is the author of the Report. It was made in conformity with an Act of the Legislature of Massachusetts, by whom Mr. Colman was some time since appointed Commissioner for the Agricultural Survey of the State. This second Report embraces a survey of the county of Berkshire.

CROPS.

The crops in Berkshire are those cultivated in other parts of the state; and consist of the usual grasses, herds grass, red top, and clover. Of grains, Indian corn, wheat, barley, rye, and oats; and of esculent vegetables, potatoes, carrots, ruta baga, mangel wurtzel, and common white turnep. In addition to these, buckwheat is raised to a considerable extent, some small amount of flax, and comparatively large amounts of teasels. The cultivation of hops was at one time attended to in some places; but is abandoned on account of the low price. Large amounts of rye have heretofore been used for distillation; but this is now pursued to a small extent.

Indian corn, the great grain crop of New England, with the exception of the two cold years, 1836 and 1837, has been always raised in the favorable locations in Berkshire with advantage. In some towns, however, the high prices obtained for wool induced the farmers to abandon entirely the growing of grain for bread, and devote their farms to the sheep husbandry.

Of corn, large crops have been frequently raised. In one of the hill towns, more than one hundred and ten bushels have been more than once obtained. In these cases a favorable situation was selected on the southern declivity of a hill, and the best cultivation was employed, the ground having been highly dressed with the spent ashes of a potash establishment.

ROTATION OF CROPS.

The usual rotation of crops is corn or potatoes, in most cases manured; then oats; third crop, wheat or some other grain, with which the land is laid down to grass. The land then commonly remains in grass for two or three years, and the same process is repeated. There are cases in which the same crop is pursued, on the same land, two or three years in succession, and without diminution of the crop. These are cases of extraordinary fertility or abundant manuring; but it is not a practice greatly prevalent; nor to be generally commended.

EXPENSES AND PROFITS OF CROPS.

I have been anxious to obtain true returns of the actual expenses and profits of crops in

a regular rotation; and I shall subjoin minutes of these expenses, furnished by experienced and judicious farmers in different parts of the county.

In the estimates which have been made of the expenses of cultivating any crops, it will be understood, that a man's labor has always been estimated at one dollar per day; and the same for a yoke of oxen, and half a dollar for a horse. In many parts of the country this, undoubtedly, is an over-estimate of the price of labor; but it seemed necessary to fix some price as a uniform standard throughout the state; and in the cost of labor involved in the production of any crop, one dollar is to be considered as the representative of a day's work. The prices of labor and the prices of board vary in different parts of the state. The estimated price includes both labor and board.

Expenses of cultivating an acre of corn in Sheffield, Mass.

Ploughing,	$1 50
Manuring, 15 loads, at 50 cents, half the manure to be charged to the corn,	3 75
Getting out manure, $2; planting, $1 25; seed, 25,	3 50
Hoeing twice, $2; gathering and husking, $2,	4 00
Interest on land, at $50 per acre,	3 00
	$15 75

Product.

Corn-stalks for fodder, equal to ¾ ton of hay,	$5 00	
Forty-five bushels of corn, at 75 cts.,	33 75	
		$38 75
Profit on the corn,		$23 00

Estimated expenses of an acre of Potatoes.

Ploughing,	$1 50
Manuring as per corn, $3 75; hoeing, $4 00,	7 75
Digging the crop, $12; interest on land, $3,	15 00
Seed, 15 bushels,	3 75
	$28 00

Product, if 300 bushels,	$75 00
" 400 "	100 00
Suppose 300 bushels,—Profit,	$47 00

Estimated expenses of an acre of Ruta Baga.

Ploughing and preparing ground, planting on ridges, eight days,	$8 00
Twenty loads of manure, half charged to this crop,	5 00
Seed, $1; sowing with machine, 50 cts.,	1 50
Fifteen days' hoeing, $15; 12 days' harvesting, $12,	27 00
Rent of land, at $30,	3 00
	$44 50
Product of above, 800 bushels, at 12½	100 00
Profit,	$55 50

Cost 5½ cts. per bushel.

I shall now proceed to give in detail an account of a wheat crop in Lenox, in 1837, by a farmer, whose uniform success in raising wheat is ample proof of his agricultural skill.

The extent of land sown was 2 acres 60½ rods; the whole crop was 89 bs. 26 qts. On one of the two acres the crop amounted to 40 bs. 20 qts. The mode of cultivation pursued by this farmer is somewhat peculiar. The land on which this crop was obtained, was the preceding year in corn; and the corn crop planted on an inverted green-sward. Some of this field was manured in the hill; and on some of it the manure was spread at the rate of twenty common cart-loads to the acre. There was not a remarkable difference between the appearance of that part of the corn crop manured in the hill, or that on which the manure was spread. A circumstance, to which the attention of farmers is particularly invited, is that in cultivating the corn, in hoeing and harrowing, particular care was taken not to turn up or break the sod from the bottom. I shall now quote from the account given by this intelligent cultivator:

"About the 15th of April, the corn hills were split with the common harrow; and ploughed once with great care. A thin coat of barn manure was spread. The manure was principally fresh horse manure. After sowing and dragging, leeched ashes were spread over that part of the field not manured. Six bushels of clean seed were sown, after having been prepared by soaking in brine from 24 to 48 hours, and rolled in finely slacked lime, care being taken to have as much as possible adhere to the kernel. Care was taken to cover the wheat sown before it became dry. After sowing, the ground was dragged (harrowed) every day for five or six days, alternately crossing the field in opposite directions. Dry light soils are greatly benefited by working them while the dew is on. Heavy soils, however, should be thoroughly warmed and dried, previously to working them. When the blade was up two or three inches, a good dressing of plaster was given."

Entire expenses of cultivation.

1 day with one pair of horses, splitting hills,	$2 00
½ " " dragging,	1 00
2 days' ploughing, at $2,	4 00
6 bs. seed wheat, at $3,	18 00
Preparing seed, 50 cts.; 1 peck salt, 25 cts.	75
2 bs. lime, 68 cts.; labor in sowing, $1,	1 68
3 days, man and team, harrowing the wheat,	6 00
2 men, 3 days, to cart and spread manure, team and cart,	9 00
24 loads of manure, at 50 cts.,	12 00
350 lbs. plaster, at $13 per ton,	2 27
Sowing plaster, ½ of a day,	34
2 hands, 3 days' reaping, $6; board of hands, $1 50,	7 50
3 days' work binding, $3; board, 75 cts.,	3 75
Carting, 2 hands 1½ day, and team, $3 75; board, 75 cts.,	4 50
	$72 79

The soil is, what is here called, a dark loam, strongly silicious. The substratum is mica slate.

One of the best farmers in Pittsfield, and in the state, puts down the expense of cultivating an acre of wheat at $9; of oats at $8; of rye at $7; of potatoes at $28; of ruta baga at $25. The items of expense are not given.

I subjoin from another enterprising culti-

vator, whose whole management in respect to cultivation and stock is entitled to high commendation, an exact account of a crop of ruta baga and flat turneps in 1837.

The charges for preparing, cultivating, gathering, and the product of 4 acres ruta baga and English turneps, are as follows:

April 21 and 22—2 days man and horse-team first ploughing 2,	$4 00	
June 5 and 6—2 days man and horse-team, second ploughing 2,	4 00	
" 6 to 9—3 teams and 3 hands, 3 days each, making 9 days drawing on 64 loads manure, $1 50,	13 50	
" 10—2 men spreading manure, $1,	2 00	
" " 1 day man and horse-team harrowing,	2 00	
" " 1 day man and horse ridging,	1 50	
" " 1 day man sowing,	1 00	
" " 1½ lbs. seed, at the price I sold seed, $1,	1 50	
		$29 50
July 5 and 6—8 days' labor hoeing and thinning, $1,	$8 00	
" 12 and 13—8 days' labor hoeing and thinning, $1,	8 00	
		$16 00
Oct. 16 to 18—18 days' labor charged for gathering, and 3 teams each 3 days, drawing, at 75 cents,	$20 25	
Cr. Deduct for tops, $2 per acre,	8 00	
		$12 25
		$57 75
The quantity gathered from 1st and 2d acres,	1600 bs	
3d acre	1080 "	
4th "	900 "	
	3580 bs.	
less than 2 cts. per bs.		
If the interest on land were charged at $40 per acre,	9 60	
And the manure at its value, (a compost of muck and stable,)	32 00	41 60
		$99 35

The turneps would cost not far from 2½ cts. per bs., $98 45.

He adds, "from my own observation much depends on having the land for the turnep crop, as also all root crops, potatoes excepted, mellow; they ought to be hoed at least three times, and oftener if the crop will admit of it. My crop of 1836, was hoed three times in the month of July, the ground was kept light until the tops covered it."

I annex to this the statement of a crop of Ruta Baga in Great Barrington, from another farmer, whose agriculture shows his industry and skill.

The amount of land was 1 acre and 20 rods. The amount of product, well cleaned roots, was 46,495 lbs.

The land on which they were raised was green-sward, and ploughed the last days in April, 1837. It had had no manure for three years preceding; it then received a thorough harrowing; it remained until the first of June; then harrowed it again smooth; and drew on thirty loads short barn manure; principally the manure of sheep, which is deemed preferable to any other for this root; this was spread and harrowed until it was thoroughly incorporated with the soil; it was then with a plough thrown into ridges 24 inches apart. It was then sowed on the 24th of June, which was ten days after the proper season for sowing; when well out of the ground, they were plastered at the rate of one bushel to the acre; they were then ploughed and hoed twice. In cultivating them great care should be taken to have them stand 24 inches apart between the rows; and the plants 6 or 8 inches from each other in the rows.

From Lanesboro' the subjoined return was obtained from a farmer whose whole establishment is a model of neat and exact husbandry; in neatness and carefulness perhaps no where surpassed.

Ploughing $2, seed ¼ bs. 50 cents,	$2 50	
Manure, 20 cart-loads, ¼ of the cord to a load, 50 cents, half to be charged to the corn,	5 00	
Getting out manure $3,	3 00	
Planting 3 feet square, $1 50; hoeing 3 times $7 50,	9 00	
Cutting up and gathering $2; husking $2,	4 00	
Interest on land at $40,	2 40	
		$25 90

Product.

Corn fodder equal to 1 ton of hay,	$9 00	
50 bs. corn,	50 00	
Pumpkins, 2 loads,	2 00	
		61 00
Profits on corn,		$35 10

This farmer is in the practice of occasionally planting potatoes among his corn. In this case he plants his corn 3 feet 6 inches apart in the rows, and a hill of potatoes between the hills of corn. In this way he frequently obtains 150 bs. potatoes upon an acre, and considers the crop of corn not much lessened on account of the potatoes. The injury to the corn is in this case rather a matter of judgment than of exact experiment; and therefore this conclusion is in my mind to be somewhat distrusted. Corn and potatoes planted in alternate rows, or one row of corn and two of potatoes, have succeeded well; and from two acres of corn and potatoes planted thus alternately, there is little doubt that more corn and more potatoes may be obtained than from two acres, where the corn and the potatoes are planted separately. In cases of alternate planting, the corn has a great advantage in its exposure to the sun and air. In the case above mentioned the potatoes occasioned a very small diminution of the number of hills of corn on the land.—Here the potatoes, which require, particularly, coolness and moisture, obtained an advantage in being protected to a degree, from the drought, by the leaves of the corn. In all these cases, however, of mixed crops, and of multiplying plants upon the land, two things are to be remembered; the first, that they are always of more difficult cultivation;

a potato crop is kept clean with much more difficulty than a corn crop, and the corn crop with potatoes intermixed with it, is kept clean with much more difficulty than when cultivated alone. The second thing to be remembered is, that the preparation of the land must correspond with the amount of vegetation grown upon it; and a great crop can be expected only from a soil abundantly enriched. The art of producing fire and warmth without fuel, or of sustaining either vegetable or animal life without nutriment, is not yet attained.

FLAX.

I recollect meeting with a few patches of flax. The crop on an excellent farm in Sheffield gives usually about 400 lbs. of flax, and 12 to 14 bs. of seed; and it may be cultivated on the same land once in four or five years. Under such circumstances, it is deemed a profitable crop. Farmers have yet to learn the great value of flax-seed, made into jelly, in fattening cattle. No substance of the same bulk and expense within my knowledge, is so fattening for neat cattle and sheep.

DAIRY HUSBANDRY.

I proceed to speak now of another of the great interests of the agriculture of Berkshire,—the Dairy.

The dairy business has always been a great business. For a time it gave way to the raising of fine wool, when the prices of that staple were high. Since the abatement of the demand for wool, with that caprice for which mankind always have been, and there is reason to think always will be remarkable, many farmers have sacrificed their flocks; and are now giving their exclusive attention to the dairy husbandry. These changes, in matters so important as the dairy or the sheep husbandry, involving, as they do, a considerable investment of capital, and many expensive fixtures, cannot be suddenly or frequently made without risk of serious loss and disadvantage.

The county of Berkshire is admirably adapted to the dairy husbandry. Grass is everywhere abundant. The soil is suited to the cultivation of esculent vegetables in the highest perfection. Several increasing manufacturing villages, with their swarming population, require supplies from the farms in the vicinity. Besides this, the great mart of the country, the city of New York, is easily accessible. Most of the farmers in Berkshire can reach Hudson with their produce, by a journey of four to eight hours, and put on board the boats at four o'clock, p. m., it is in New York by an early hour the next morning. The farmer usually allows two cents a pound commission for the freight and sale of his butter; and, upon other produce, it is equally reasonable. He does not return from the river empty; but carries home a load of plaster, or of articles of necessity for his family. The great roads to the river, after the hills are surmounted, are among the best in the whole country. The rail-road, already open from Hudson to West Stockbridge, will afford to many of the farmers all the facilities they can desire for reaching the Hudson river.

PRODUCE AND EXPENSES.

1. *Egremont.*—I will, in this place, state, as an example, the operation of a farmer who resided about twenty-five miles from Hudson. The great object of his attention was the making of butter, which was sold every week in the New York market.

From 18 cows he sold 2,400 lbs. butter, at 23 cts. net. With these cows he fed 17 spring pigs until October, whose average weight was 177 lbs. each; half of this pork, say 88 lbs., was to be credited to the cow. He is of opinion, that when pork is $10 per 100 lbs., a cow will give at least $8 worth of pork per year.

Cow, Cr.

133 lbs. butter, at 23 cts., (commission paid,)		$30 59
Pork,		8 00
		$38 59

Cow, Dr.

Wintering,	$12 00	
Pasturing,	5 00	
Salt,	25	
Interest on $25, 10 per cent. risks included,	2 50	
		$19 75
Profits of a cow,		$18 84

It is understood, that no extra feed is in this case given to the cow; and the butter and milk used in the family, it is supposed, will fully pay for the attendance. This is a fair profit; but it is, as I think we shall presently see, much less than it should be. No animal is better entitled to good keeping than a cow; because none makes a more liberal return for all the extra kindness and feed and attention bestowed on her.

In another dairy, nine cows made 1,550 lbs. of butter, and 300 lbs. of cheese.

Another dairy of twenty cows produced,—of butter, 500 lbs.; of new milk cheese, 4,000 lbs.

In this town, two acres of land are deemed sufficient for pasturing a cow or fatting a steer. Twenty head of cattle, made up of cows and three year old steers, were fatted upon thirty acres of land.

The subject of dairy-produce is of such importance, that I shall give various returns and calculations. I omit names; I should be glad to give them, and in a majority of cases it might not be disapproved; but a fear of giving offence, or of being thought to take an

improper liberty, or of interrupting that freedom of communication, which I wish should subsist between myself and the farmers, and which seems indispensable to the success of the survey, induces me to withhold them, save where permission has been explicitly granted, or the nature of the case renders it obviously proper. The statements, which I give, rest upon undoubted authority.

2. In *Otis.*—Twenty cows gave 5,000 lbs. new milk cheese, for sale; each averaging also 25 lbs. of butter; 600 lbs. of cheese were also used in the family.

Cow, Cr.

280 lbs. cheese, at 8 cents,	$22 40
25 " butter, at 20 cents,	5 00
Calf,	4 00
Pork, 26 lbs., at 6 cents,	1 56
	$32 96

Cow, Dr.

Wintering,	$12 00	
Pasturing,	5 00	
Interest on cost of cow, $15—10 per cent.,	1 50	
Labor and attendance,	2 16	
		$20 66
Balance in favor of cow,		$12 24

3. *Lanesboro'.*—Sales from 12 cows:—cheese at 12 cents; butter at 25 cents; gross amount, $600. No account in this case is made of supplies in the family.

4. *Sandisfield.*—The average yield of a cow in ordinary seasons is rated at 250 lbs., with common keeping. By extra keeping, the quantity is increased to 350 or 400 lbs. The quantity of butter in addition, to each cow, is supposed to be from 40 to 50 lbs., where new milk cheese is made.

The amount of cheese made in Sandisfield, in 1837, was estimated by a most competent authority, at 300,000 lbs.

Another farmer, with a dairy of 15 cows, states the average product of a cow, if she raises her calf, at 250 lbs.; if otherwise, at 300 lbs.; and 25 lbs. butter also, from each cow. Four hogs may be kept to 20 cows.—In this way, weighing 100 lbs. in the spring, they will weigh 300 lbs. in the fall. 140 lbs. of pork is to be credited to 5 cows.

The cost of wintering a cow here, is rated at $10; pasturage, $4. A good dairy woman will take charge of thirty cows, with assistance in milking and in handling cheese. Her wages will be $1 50 per week, with board.

5. In *Tyringham*, the average yield of a cow is reckoned at new milk cheese, 283 lbs., and butter at the same time, 57 lbs. A dairy of 28 cows gave 7,912 lbs. new milk cheese, and 1,600 lbs. butter. A large amount of pork was fatted on this farm; but it is difficult to say what portion of it is to be credited to the dairy.

6. In *Sheffield*, the average product of 28 cows was 394 lbs. new milk cheese, and 50 lbs. of butter each.

The product of a cow is thus stated by this excellent manager:

Cow, Cr.

400 lbs. new milk cheese, at 8 cents,	$32 00
Calf, (killed at 3 days' old,)	1 00
50 lbs. butter, at 16½,	8 33
Whey and butter-milk, make 100 lbs. pork,	8 00
	$49 33

Supra, Dr.

Winter keeping,	$12 00
One acre of land costing $50 will pasture the cow,	3 50
Salt 25 cents, 3 bs. bran $3,	3 25
Int. on the value of cow at $25, 10 per cent.,	2 50
Labor of milking, making butter, cheese, &c.,	4 00
	$25 25
Balance in favor of the cow,	$24 08

The quantity of land estimated for pasturage in this case seems small. It must be small for a general rule; another farmer in the same town assured me that he kept one yoke of oxen all the season, and one horse half the season, on two and a half acres of land, which he showed me. The land had been greatly benefited by plaster.

EXTRAORDINARY COWS.

I shall give an account of some remarkable animals which have been found among what are called our native cattle. It is not pretended that they constitute a distinct race or characterize a particular class of animals; but they show at least what materials are within our reach, upon which to build a stock of high character.

A cow of Samuel D. Colt, of Pittsfield, from 1st December to 27th April, 148 days, produced 193 lbs. of butter.

A cow owned by R. Campbell, of Pittsfield, has yielded 26 beer quarts of milk per day.

A cow owned by Hosea Merrill, gave 30 beer quarts of milk per day.

A cow owned by D. Fenn, of Stockbridge, 8 years old, produced in one week 12 lbs. 9 oz. butter. During the same time, 10 quarts of the milk were sold, and in addition cream and milk were used freely in the family.

A cow owned by Calvin Davis, 4 years old in the spring of 1838, in 172 days produced 225 lbs. butter, and fatted a calf. An accidental injury to the cow, prevented a continuance of making butter.

Two cows of Wm. Dewey, of Alford, in good season, averaged, for a length of time, 14 pounds of butter each per week.

A cow belonging to the late Dr. Hyde, of Stockbridge, for some time produced fourteen pounds of butter per week.

Two cows in Vandeusenville, produced 14 lbs. of butter each per week.

A cow belonging to —— Millard, of Egremont, produced 14 lbs. of butter per week.

From two cows belonging to Russell Brown, in Cheshire, besides the free use of milk and cream in the family, 90 lbs. of butter were produced and sold in three weeks, and in four successive weeks 114 lbs.

A cow owned in Stockbridge, by Stephen Willard, produced as follows:

In 321 successive days			331	lbs. butter
" 284	"	"	293	"
" 306	"	"	318	"
911 days			942	lbs.

"The above is exclusive of 25 lbs. made while fattening three calves." He adds, "my method of keeping has been grass only, from spring to fall. In the fall I begin with pumpkins and potatoes, and feed moderately during the time she gives milk. An account has been kept for only three years; but it would not vary much from the above, for the twelve seasons I have had her, except the present season she has been farrow." This cow is now eighteen years old, "and will calve again about the middle of February."

Two cows owned in Pittsfield, produced each 50 lbs. of milk per day; and one other 32 lbs. at a milking.

A cow owned by Thomas Hodges, in North Adams, produced last year 425 lbs. of butter; 400 lbs. of this amount were made in nine months. Her feed consisted of one quart of rye meal and a half peck of potatoes per day; and very good pasturing.

To this list I will add the case of another cow, in the neighboring county, whose product must be considered as quite extraordinary. She is owned by Joseph F. Upton, of Ashfield, Franklin county.

From the 1st of April, 1837, to the middle of February, 1838, her product was 335 lbs. 15 oz. From the 9th of May, 1838, to the 28th of December, 1838, she had produced 303 lbs. 3 oz. of butter, and was still making at the rate of one pound per day.

The owner adds, "in the year 1837, I killed my calf at three days old, and gave my cow the skimmed milk through the summer. I commenced the first of October to feed on potatoes. I gave her about one peck per day boiled as long as she gave milk. In the year 1838, I fattened my calf and killed it at four weeks old. It weighed 75 lbs. She has had nothing but grass this year, until the first of October; since then I have fed her with one peck of boiled potatoes per day. My cow is seven years old last spring." Her winter-keep at present, while giving milk, is as much hay as she will eat, and one peck of boiled potatoes per day. These cows are all of native stock, without any admixture of foreign blood. The three cases of largest product certainly cannot be considered as examples of high feeding. It is extremely desirable that some skilful farmer should, by a judicious selection from such animals as these, endeavor to form an improved race for the dairy. I have already said that this has been attempted by one gentleman in the state.

Before I proceed to say what he has accomplished, I will mention an interesting fact, communicated to me by an observing farmer of Stockbridge. Thirty-two years since, he became the possessor of a very productive cow; and has continued the breed to this day. She has never produced a bad milker, and some of her descendants, owned by other persons in the village, do equal credit to their parentage. The yield of one of them, which came within my knowledge, is twenty quarts per day.

DAIRY AND SOILING.

In Waltham, Middlesex county, a gentleman had four cows; but not a rod of ground, which could be appropriated to pasturage.—These animals were, therefore, never out of the barn or the barn-yard; and were fed with grass mown for them; with green corn fodder, which had been sown broadcast for this purpose; and with about three pints of meal each per day. The amount of their produce was kept for thirteen weeks. Two of these animals were heifers of two years old, who had calves the same spring; and the whole milk of one of them was taken by her calf during six weeks out of the thirteen. Some of the milk of the other was taken for family use, but the quantity not determined. Under these circumstances, these heifers could not be rated as equal to more than one cow of full age and milk. From this stock, however, thus circumstanced and fed, 389 lbs. of butter were made in the thirteen weeks. An additional pound would have given an average of thirty pounds a week for the whole time to a stock which must be in fairness set down as three cows only. This experiment was made in 1837.

CARROTS.

Jeremiah Valet, late of Stockbridge, but now an emigrant to the fertile west, a true philosopher in a homely garb, a pure diamond though never in the hands of the lapidary, (I would not say this if he were not out of the reach of my voice,) was much in the habit of raising carrots; and gave a preference to them over every other vegetable for fattening swine and cattle. This was the result of repeated trials and long experience. To fatting swine he gives them boiled; to store hogs, raw. His crops average 800 bushels to the acre.

Jno. Merrill, of South Lee, has been a very successful cultivator of carrots. He states

the yield on two acres at 600 bushels to the acre; and the cost of cultivation, exclusive of manure and rent of land, at 25 dollars per acre; or a little more than four cents per bushel. For feeding horses, he says, he should prefer one hundred bushels of carrots and one hundred bushels of oats to two hundred bushels of oats. He applied them in a raw state to the feeding of his team horses, and horses in preparation for market; and they were kept by them in high health and spirits. Oats followed his carrot crop on the same ground with great success. The experience of J. C. Curwen, Eng., in the use of carrots for horses, corresponds with that of Mr. Merrill. The authority of Curwen is unquestionable; and he was in the habit of employing constantly as many as eighty horses on his farm and in his extensive coal mines.

"I cannot omit," he says, "stating the great profit of carrots. I have found by the experience of the last two years, that where eight pounds of oat-feeding was allowed to draft horses, four pounds might be taken away and supplied by an equal weight of carrots; and the health, spirit, and ability of the horses to do their work be perfectly as good as with the whole quantity of oats. With the drill, husbandry and proper attention, very good crops of carrots may be obtained upon soils not generally supposed suitable to their growth."

He adds in another place:—"The profits and advantages of carrots are, in my opinion, greater than any other crop. This admirable root has, upon repeated and very extensive trials for the last three years, been found to answer most perfectly as a part substitute for oats. Where ten pounds of oats are given per day, four pounds may be taken away; and their place supplied by five pounds of carrots. This has been practised in the feeding of eighty horses for the last three years, with the most complete success, and the health and condition of the horses allowed to be improved by the exchange. An acre of carrots supplies an equal quantity of food for working horses, as sixteen to twenty acres of oats."*

My own experience of the value of carrots, which has not been small, fully confirms these statements. I have obtained at the rate of more than a thousand bushels to the acre on three quarters of an acre; but on several acres my crop has usually averaged 600 bushels to the acre.

—— Smith, of Middlefield, Hampshire county, from three-fourths of an acre obtained 900 bushels.

Charles Knowlton, of Ashfield, Franklin county, this year obtained 90 bushels on twelve rods of ground. This was at the rate 1,200 bushels to the acre.

D. Moore, of Concord, Middlesex county, from six rods of land, obtained this year 56 bushels, or at the rate of 1,493 bushels to the acre.

According to Josiah Quincy's experience, in Quincy, Plymouth county, charging labor at one dollar per day, his carrots cost him eleven cents per bushel. David and Stephen Little, in Newbury, Essex county, in 1813, obtained 961 bushels to the acre, at an expense of $79 50, every expense included, excepting rent of land. This was at a rate less than nine cents to a bushel.

I shall subjoin in the Appendix an account of an experiment made in feeding swine, illustrating the value of this vegetable, from Arthur Young.

The great objection to the cultivation of carrots lies in the difficulty of keeping them, while growing, free from weeds. If sowed without any preparation, the seed is a long time in germinating, and a plentiful crop of weeds is liable to get possession of the land before the carrots make their appearance.—There is another difficulty. The carrot seed, from its minuteness, is liable to be sowed too thickly. To obviate, in a degree, these objections, let the ground be ploughed deeply, well manured, and put in fine tilth; and let the first, and perhaps the second, crop of weeds be ploughed in. After this, let the land be thrown into ridges two feet apart, and the seed sown on top of the ridges, either in a single line, or the ridges be made so wide as to receive two rows of carrots, eight inches or one foot apart. In the mean time the seed should be freely mixed with fine sand; and this sand kept so moist that the seed shall germinate. As soon as it is sprouted it should be sown. This may be so arranged that the sowing shall take place about the first of June. They will then have the start of the weeds. The mixture with sand will prevent their being sown too thickly.—After the first thinning and weeding is over, if done with care, the battle may be considered as won. Afterwards let them be cultivated with a plough, or cultivator, and kept clean. When the time of digging arrives, the work will be greatly facilitated by passing a plough directly along the side of the carrots; and they are easily thrown out by the hand.

RUTA BAGA.

Ruta baga are differently estimated by different individuals. Mr. Merrill, of Lee; Valet, of Stockbridge; Lawton, of Sheffield; Bacon and Chapin, of Richmond; Colt, Goodrich and Plunkett, of Pittsfield, highly approve of ruta baga; and some of them consider them

* Curwen's Hints on Agricultural Subjects.

of equal value with potatoes for swine or cattle. Mr. Werden, of Richmond, dislikes them, and says the general experience of farmers there, is against them. It is difficult to reconcile these contradictory statements. They are by no means so nutritious as potatoes, especially those kinds of potatoes which are most farinaceous; and they are not comparable to carrots or parsneps, or the *sugar-beet*, for feeding stock. But they are a valuable, though an exhausting crop; and are raised at comparatively little expense. The golden yellow turneps, with purple tops, are the preferable kind. The white kinds, and what are called the French turneps, are an inferior plant.

Mr. Merrill, of Lee, applied them to the fatting of cattle with much success. He purchased a yoke of cattle in the fall, in low flesh, at $50, and having fed them through the winter on 2 bushels of ruta baga each per day, with good hay, but with no other provender, he sold them in the spring for $170, at $8 per 100 lbs.

Mr. Ashburner, of Stockbridge, whose cultivation of vegetables is no where excelled in neatness and productiveness, is in the habit of transplanting his sugar-beet by merely making a hole with a hoe, and laying them in horizontally, keeping the tops free. He has found planting with a dibble too slow a process; and the plant is not so likely to live, as the fine dirt is not so easily brought up to the small roots of the plant. He has tried the transplanting of wheat, by way of experiment, but it was not successful.

I have transplanted ruta baga with great despatch and entire success, simply by ploughing a furrow; then taking the plants from a seed-bed, dipping them in water, separating them and laying them along in the furrow, with the top on the furrow-slice, at a distance of a foot apart, as fast as a man could walk; and soon following with a plough and covering them. It is well to go over the ground with a hoe to relieve plants that may be too deeply buried, and to cover those which may by accident have been left exposed. They are almost certain to live; and I have thought the work not more than to thin them out when they are sowed thickly, where they are to stand. There is an additional advantage in this method, that the plants may be forwarded in the nursery, when it is not in your power to prepare the land in season for sowing the crop where they are intended to stand. I am not able to say whether the sugar-beet is as tenacious of life; but the experiments of Mr. Ashburner lead to such a presumption.

☞Further extracts may be given hereafter. We hope that the example of Massachusetts, New York, and other states in regard to agricultural improvement, &c., may cause our legislators to give immediate and effective attention to the subject. All that is necessary is for the people to will it, and it is done. Pennsylvania is cast into the shade—she is emphatically an agricultural state, and should take the lead in fostering and promoting all improvements in the science of agriculture. Agriculture, the basework of the prosperity of the state, has been almost wholly neglected, while every other interest has been sustained. The farmers are themselves to blame for this in a great measure. Let them bestir themselves—form county and township societies, a State Agricultural Society,—let them commence the work of improvement energetically throughout the Commonwealth, and the legislature will unquestionably exert itself to the extent of its constitutional powers, in appropriations for suitable premiums, surveys, &c. We hope that our correspondents will take up this subject.

For the Farmers' Cabinet.

Corn and Cob Meal.

I recollect many years since reading several essays on this subject in the memoirs of the "Penna. Agric. Society," since which, little has been said concerning it, until within a year or two, when some of our millers commenced manufacturing it; anxious to satisfy *myself* on the subject of its value at the commencement of ploughing this spring, I put my teams to work with this, mingled with cut hay, in the same quantity as we have always fed of ground oats and corn to plough horses. The result has been much as I anticipated; the horses, although they have worked very well, yet they have lost more flesh than ordinary during a spring ploughing. The conclusion I have arrived at is, that it is poor economy to substitute corn cobs for oats, although the horses will eat it as freely if well ground, yet the extra feed I am now obliged to resort to, to bring my teams back to their wonted condition, will counterbalance what has been saved in oats during my experiment. Although I am done with "corn and cob meal," yet if any gentleman is disposed to give it a trial, I would not discourage him, but rather encourage him to make the experiment, and then tell us all about the result through the columns of the Cabinet. M. S. Kirkbride.

Morrisville, 4th mo. 23d, 1839.

From the Maine Farmer.

Plan of a Piggery.

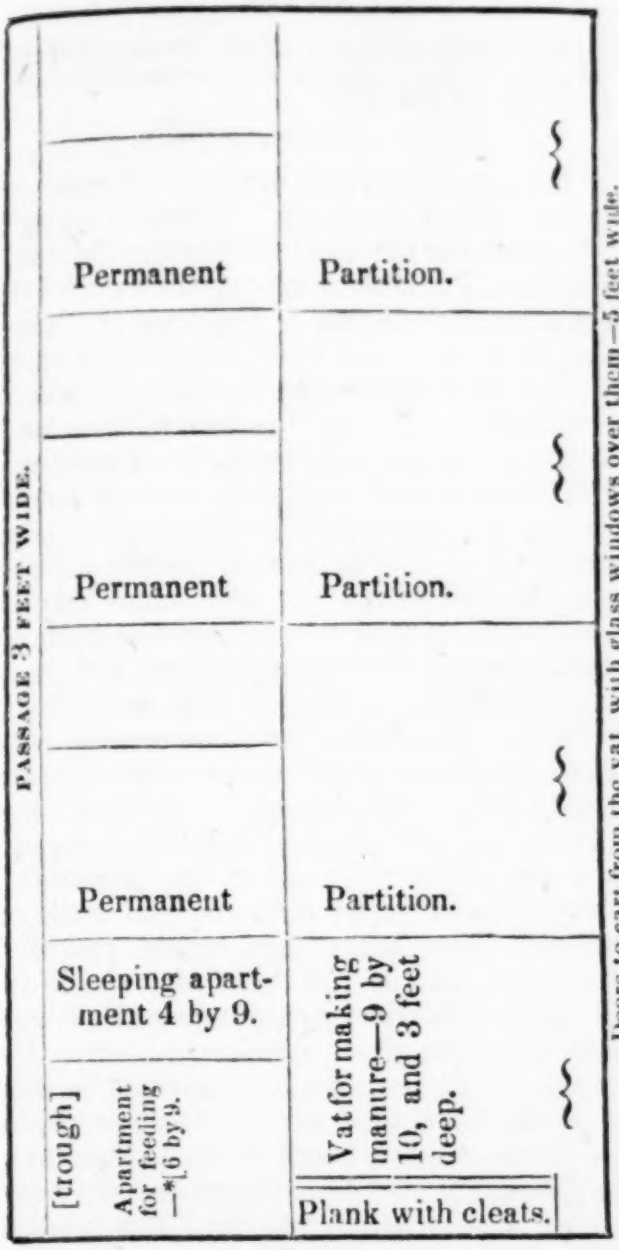

Fig. 37.

The foregoing is a description of the Piggery of Mr. B. SPRINGER, of Litchfield, the dimensions of which we have accommodated to our columns, without regard to exact proportions. But as we name the dimensions of each part of it, our readers can judge of its convenience and capacity. The building is 36 feet long and 22 feet wide, the roof shingled, and the walls made tight by clapboarding. A sill passes lengthwise the building to support the floor, which covers only one part of it. The other part is divided into four vats for making manure, which are dug three feet deep, into which all the rubbish, leached ashes, &c. &c., that are made about the premises, are thrown, and by a spout from the sink in the kitchen, all the soap suds and wash of the house is carried out and deposited in a trough which is put up exactly level, and extends the length of all the vats, and lets out an equal quantity into each. Muck, weeds, and other materials, are also collected and deposited in the vats. The remainder of the room, after taking out a passage three feet wide, is divided into pens for eating and sleeping. The floor to the former inclines six inches towards the vat, the more easily to drain off any filth that may collect upon it, but in the latter it is level. The partition between the passage way and pens, and between the two pens may be made of any convenient height. The apartment for sleeping has a cover, which may be raised or shut at pleasure, which keeps them very warm in winter and affords them proper ventilation in summer. A plank with cleats is placed one end upon the floor and the other on the bottom of the vat for the hogs to pass up and down on. On the side of the building, opposite the passage, are doors 5 feet wide, which open to the vats, with long glass windows over them, similar to the windows frequently placed over barn doors. There is an aperture in the partition between the pens for the hogs to pass from one to the other, which may be apportioned to the size of the hogs to be kept in them. In one of the apartments there is a door that opens to a yard for the purpose of giving a free passage to young pigs and sows that are about bringing forth their young.

This is certainly the best piggery we have seen in this State, but still it is susceptible of being improved, as Mr. Springer is fully aware. We think that a building four feet wider than this might be made, and the floor of the pens which, without injury, may be made one foot shorter, let run over the vats four feet, which would give a space of nine feet on the other side of the passage way. in which may be a room to keep roots and other food for the swine, and another for boiling and steaming it.

This would add very much to the convenience of the establishment at very little additional cost. We give this plan, and make these suggestions that those who are about erecting piggeries may improve by them.—The business of pork raising is just beginning to attract attention in this State, and it cannot be expected that the best construction for piggeries can be at once discovered. One advantage in this plan is, the manure is kept under cover, free from the evaporating influence of the sun and atmosphere, and from washing away by rain.

Horses and Oxen for Teams.

I have observed that in many places horses have taken the place of oxen, are used for the purposes of farming, introduced, I suppose, under the impression that they are better adapted to the service, and more profitable to the owner. I am not about to contradict the truth of this supposition, or prove that a man cannot plough and harrow as fast and as well with horses as with oxen, but shall merely mention a few of the comparative

merits and demerits of these animals, that we may determine which is most useful and profitable.

The horse, when put to service, must have arrived at his full strength and value, consequently there is no gain on the capital invested, besides what arises from service, and, as he is good for nothing at the end of service, there will be a discount at last equal to the amount of his cost.

The ox may submit to the yoke when young and partly remunerate his owner for cost of keeping while obtaining his growth, when he may be sold to the butcher, and the money invested in younger stock; thus there will be a constant gain in growth while the service will be sufficient for the purposes of farming. The horse, if kept on hay alone, must have his masticating powers in almost perpetual motion; the ox reserves some of his time for rumination, hence there may be a difference in the cost of keeping. The cost of equipping a horse for the regular farm service is greater than that of the ox, and more time is required to put on and off these equipments.—In shoeing, the difference of cost is in favor of the ox, as also it is in the quality of the manure they make. The ox has an intrinsic value arising from the good qualities of his flesh and skin, the one being good for food, the other for leather, whereas very little can be made out of a dead horse. For some kinds of farm service the horse is preferable to the ox, such as light ploughing and harrowing, but for carting, hauling stones, and other heavy work he is not so good. He is better adapted to the road service, and is useful for milling, marketing, and *meetening;* he also may be used journeying, and visiting.—It is convenient, and, perhaps, profitable to keep both these useful animals as well as cows, sheep, and other stock, but when the number of horses greatly exceed those of oxen, or even cows, it is time to begin to count the cost, which may be done by opening an account current with each animal, keeping debt and credit of what you give or receive from each.—*Maine Farmer.*

Salt should be regularly fed to cattle both in winter and summer. They will never eat too much if it is placed constantly before them where they can obtain it all times. The best way to feed them with it, except when snow is on the ground, is to employ salt troughs for the purpose, which are made most convenient by making a deep cavity in the convex side of a short thick piece of slab, or a chip from scoring timber, to be kept filled with salt, and placed flat upon the ground. They are very cheap and will not easily upset. In winter when the ground is covered with snow, salt should be applied by brining the fodder.

THE DAIRY.

No. III.

On the Management of the Dairy, particularly with respect to the making and curing of Butter.

BY DR. JAMES ANDERSON.

The next object that demands attention is, the utensils of the dairy. These in general must, from the nature of the business, be made of wood. But of late many persons, who affect a superior degree of elegance and neatness, have employed vessels made of lead, or of common earthen-ware, for various purposes in the dairy. But, as the acid of milk very readily dissolves lead, brass, or copper, and with these forms a compound of a poisonous nature; such vessels must be accounted highy pernicious in the dairy, and therefore ought to be banished from it. The same may be said of vessels of any of the common kinds of earthen-ware, which being glazed with lead, and the glazing soluble in acid, are equally improper. Mr. Hayes has recommended cast-iron as a proper substitute for these; but this metal also is soluble in acids; and though the solution be not poisonous like the others, yet, as it may affect the taste of the products of the dairy, and render their medical qualities different from what they would naturally have been, the use of these also should be laid aside. In short, excepting vessels of true porcelaine, or glass, which are greatly too expensive, I know of none that could be with propriety substituted for wooden vessels, in the dairy. China, or glass vessels, however, for obvious reasons, can never come into general use in the dairy; nor will the sensible husbandman ever think of any other than wooden dishes for his milk; as these, if properly managed, can be kept as sweet and pure as the imagination can conceive. This fact is so generally known as to render wooden dairy utensils common in most parts of the country, so as that they can be readily procured everywhere, of a proper quality and form of construction, and therefore nothing more on this subject need be here said.

The creaming dishes, (so I call the vessels in which the milk is placed for throwing up cream,) when properly cleansed, sweet, and *cool*, are to be filled with the milk as soon after it is drawn from the cow as possible, having been first strained carefully through a close strainer, formed of a large wooden bowl with a hole at the bottom covered with a very close sieve of fine wire, (silver wire is best,) or hair web woven for that purpose; or thin cloth of any kind, (I should always prefer the wire, as most durable and cleanly,) so as to keep back hairs, &c., that may accidentally fall from the cow. These dishes should never exceed three inches in depth,

whatever be their other dimensions; and if the plan recommended above, of separating the milk into two parts, and of keeping each cow's milk by itself, shall be followed, it would be convenient to have them made of such dimensions as to contain about one and a half or two gallons, English. As soon as they are filled they are to be placed on the shelves in the milk-house, where they should be allowed to remain perfectly undisturbed till it be judged expedient to separate the cream from them.

The length of time that should elapse before the cream be separated, will depend upon the degree of heat at the time, and the particular views of the owner of the dairy. In a moderately warm temperature of the air, if very fine butter be intended, it should not be allowed to stand more than six or eight hours. For ordinary good butter it may safely be let stand twelve hours or more; but where the dairy is so large as to afford a sufficient quantity of cream, and where the very best butter is intended, (the milk being to be converted to some other use, while yet sweet,) it may be separated after standing only two, three, or four hours.

When the cream is to be separated, the milk-pan should be taken from the shelf and placed on the table. The cream is then to be separated from the edges of the vessel, to which it firmly adheres, by means of a knife with a blunt edge provided for that purpose, (the blade formed either of *pure* silver or of fine ivory,) which should be made to run round the edges of the whole. The cream is then to be carefully drawn towards one side by means of a skimming-dish, and then lifted up with great nicety so as to take the whole without any of the milk, if possible.—This requires a dexterity of manipulation* that can be acquired by practice alone; but it is of great importance to the success of the dairy that it be well done, for if any part of the cream be left, the *quantity* of butter will be diminished, and if any part of the milk be taken, its quality will be debased. The wooden skimming-dishes commonly employed, seem not to be so handy for this purpose as could be wished. An improvement on this apparatus might be suggested, but this I decline at present to enlarge upon.

When the cream is thus obtained, it ought to be immediately put into a vessel by itself, there to be kept till a proper quantity be collected for being made into butter: and no vessel can be better adapted for that purpose than a firm, neat-made wooden barrel, in size proportioned to the extent of the dairy, open at one end, with a lid exactly fitted to close it. In the under part of this vessel, close to the bottom, should be placed a cock and spigot, for drawing off, from time to time, any thin serous part of the milk that may chance to be there generated; for should this be allowed to remain, it acts upon the cream in a powerful manner, and greatly diminishes the richness of the quality of the butter. The inside of the opening of the barrel should be covered with a bit of close fine wire (silver) gauze netting to keep back the cream, while the serum is allowed to pass; and the barrel on its stand should be inclined a little forward in the top to allow the whole to run off.

Many persons who have had little experience in the dairy believe that no butter can be of the finest quality, except that which has been made from cream that has not been kept above one day; but this is a very great mistake. So far indeed is this opinion from being well founded, that it is in very few cases that even tolerably good butter can be obtained from cream that is not more than one day old. The separation of butter from cream only takes place after the cream has attained a certain degree of acidity. If it be agitated before that acidity has begun to take place, no butter can be obtained, and the agitation must be continued till the time that that sourness is produced, after which the butter begins to form. In summer, while the climature is warm, the beating may be, without very much difficulty, continued until the acidity be produced, so that butter may be got; but in this case the process is long and tedious, and the butter is, for the most part, of a soft consistence, and tough and gluey to the touch. If this process be attempted during the cold weather in winter, butter can scarcely be in any way obtained, unless by the application of some great degree of heat, which sometimes assists in producing a very inferior kind of butter, that is white, hard, and brittle, with very little taste, and almost unfit for any culinary purpose whatever.

The judicious farmer, therefore, will not attempt to imitate this practice, but will allow his cream to remain in the vessel appropriated for keeping it, until it has acquired that proper degree of acidity that fits it for being made into butter with great ease, by a very moderate degree of agitation, and by which process only very fine butter ever can be obtained.

How long cream ought to be kept before it attains the precise degree of acidity that is necessary to form the very best butter, and how long it may be kept after that period before its quality be sensibly diminished, has

* This may be accounted a cramp word, but it expresses the idea intended so much better than *operation* or *process*, or any other word in common use, that I could not think of rejecting it; and hope it will soon come to be as generally used as any other word in the language.

never yet, I presume, been ascertained by any experiments that can be relied on. So little nicety has been observed in this respect by practical farmers, even those who have a high reputation for making good butter, that few of them ever think of observing any precise rule in this respect with regard to the different portions of their cream, seeing they in general make into butter all the cream they have collected since the former churning, so that the new and the old is all beaten up together; and I can find nothing like a uniform rule established among them as to the time that should intervene between one churning and another, that being usually determined by local or accidental circumstances. I am, myself, inclined to believe, that if the cream be carefully kept, and no serous matter allowed to lodge about it, a very great latitude may safely be admitted in this respect. How long cream may be thus kept, in our climate, without rendering the butter made from it of a bad quality, I cannot say; but I can say with certainty, that it may be kept good for a much longer time than is in general suspected, even a great many weeks. It is, however, certain, that cream, which has been kept three or four days in summer, is in an excellent condition for being made into butter; and I am inclined to believe, that from three days to seven may be found in general to be the best time for keeping cream before churning; though if circumstances make it necessary, a considerable latitude in this respect may be allowed.

If, however, it should chance that any farmer has such a quantity of cream as might be worth his while to churn once every day, there is nothing to prevent him from doing it. He has only to provide a separate vessel for holding the cream for each day he means it should stand before churning; if three days three vessels, if four days four vessels, and so on. Thus he might churn every day cream of three days' old, or of four, or any other number of days old, that he might incline. In the same manner, if it were found that the cream of two, of three, or of a greater number of days gathering, was required to make a proper churning, it might be easy so to contrive it as to churn it every day, as will be obvious to any one who shall think upon the subject. In this way the operation of a dairy may be kept perfectly regular and easy.*

The vessel in which butter is made, usually called a *churn*, admits, in the form of it, a considerable diversity. The simplest that I have seen I should prefer as the best, merely because it admits of being better cleaned, and of having the butter more easily separated from the milk than any of the others; this is the old-fashioned, upright churn, having a long handle with a foot to it perforated with holes, for the purpose of beating the cream by being moved upward and downward by hand. But though, for the reasons assigned, I should prefer that form of a churn, other persons may choose that which they like best, as all the improved sorts, under skilful management, will perform the business perfectly well. Indeed, if the cream be prepared as above directed, the process of churning will be so easy, as to render those utensils in general the most commodious which can be most easily filled and emptied.

In the process of churning, much greater nicety is required than most persons seem to be aware of. A few hasty, irregular strokes may render the whole of the butter of scarcely any value, that, but for this circumstance, would have been of the finest quality. The owner of an extensive dairy, therefore, should be extremely attentive to this circumstance, and should be at great pains to procure a proper person for managing this branch of business. This person ought to be of a cool, phlegmatic temper, sedate disposition and character, and ought never to allow another person, especially those who are young, to touch the churn, without the greatest caution and circumspection. Those who have been used to see cream churned that has not been properly prepared, will think, perhaps, that this would be severe labor in a large dairy for one person; but nothing is more easy, as to the bodily labor it requires, than the process of butter-making, where the cream has been duly prepared.

The butter when made must be immediately separated from the milk, and being put into a clean dish, (the most convenient shape is that of a shallow bowl,) the inside of which, if of wood, should be well rubbed with common salt to prevent the butter from adhering to it. The butter should be pressed and worked with a flat wooden ladle, or skimming-dish, having a short handle, so as to force out all the milk that was lodged in the cavities of the mass. A considerable degree of strength, as well as of dexterity, is required in this manipulation. The thing wanted is to force out the milk entirely, with as little tawing of the butter as possible; for if the milk be not entirely taken away, the butter will infalliby spoil in a short time, and if it be much worked, the butter will become tough and gluey, which greatly debases its quality. This butter is in some places beaten up by the hand, which I consider as an indeli-

* Some persons choose to churn the whole of the milk without separating any part of the cream. In this way they obtain a greater quantity of butter, though of an inferior quality. By careful management, however, especially if a portion of the first-drawn milk be separated, very good butter may be obtained; but I think the practice on many accounts, is not to be recommended.

cate and barbarous practice—a practice which no tidy and reputable farmer would ever permit.

Some persons employ cold water in this operation, which they pour upon the butter, and thus, as they say, wash it; but this practice is not only useless, as the butter can be perfectly cleared of the milk without it, but also pernicious, because the quality of the butter is thus debased in an astonishing degree. Nothing is so hurtful in a dairy as water *improperly used*, which, if mixed in any way with either milk or butter, tends greatly to debase the quality of the last.

When the butter is entirely freed from the milk, if it is to be sold sweet, it may be made up into any form that is most generally liked at the market where it is to be sold. If the heat should be so great as to render it too soft to receive the impression of the mould, it may be put into small vessels which may be allowed to swim in the trough of cold water under the table, but without allowing any of that water to touch the butter;* there it will in a short time acquire the necessary degree of firmness, (especially if a little bit of ice shall have been put into the basin,) after which it may be taken out and moulded into proper form. It should then be put down, in proper dishes, upon the stone border that surrounds the trough, where it may be kept cool and firm till it be packed up to go to market.

In every part of the foregoing process it is of the utmost importance that the vessels, and every thing else about the dairy, be kept perfectly clean and sweet, for without this precaution there neither can be pleasure nor profit derived from it. This is a circumstance so universally admitted, that it may seem superfluous to take notice of it in this place.—Yet though this be generally known and admitted, and though every person who attempts to manage a dairy of any sort may intend to have things clean and proper, they may nevertheless be, in some cases, at a loss for the proper way of effecting their intentions, or of guarding against certain evils, which, if once allowed to take place in the dairy, will not be easily removed. Some hints, therefore, are subjoined that may be of service to those who are not well acquainted with this department of business.

HINTS, &c.

[As soon as the cream is separated from the milk, the dishes should be carried out of the milk-house, and immediately emptied, and the skimmed milk applied to the uses that the owner of the dairy judges to be most advantageous to him. As soon after the dishes are emptied as possible, they must be well washed with scalding hot water, which should be kept in readiness for that purpose; and as the naked hand cannot be put among the scalding water, a scrubbing brush of a proper construction must be kept in readiness for that use. This may be made of a bunch of wire, firmly bound up with strong pack-thread, where other materials cannot be had; but the stumps of an old heath-besom, after the small twigs have been worn off, firmly bound together, are found to answer this purpose remarkably well, nor ought any thing else to be sought for when that can be had, for this is both firm and tough, so as to stand the work extremely well.

[After the dishes have been thus perfectly scalded, and thoroughly scrubbed in every part, they must be carefully rinsed with blood-warm water, and well scoured by hand with a coarse linen cloth. They are then to be turned down one by one, as they are finished, bottom upwards, upon a clean shelving board to drip. When the whole are gone over in this way, the dairy-maid returns to the first done, and with a dry cloth wipes them one by one as clean as possible. They are then placed in ranges, so as to be exposed fully to the action of the sun and air on the inside, that the whole of the moisture may be dried up as quickly as may be; for nothing tends so soon to destroy the sweetness that is so desirable in dairy vessels as for the moisture to be allowed to remain long about them. Therefore, in dull, foggy weather, when this cannot be quickly dried up by the external air, it is necessary to do it by the aid of fire in the house. As soon as the dishes are thoroughly dried, they must be carried into the shade, and placed in order on shelves to cool, to be in readiness for use when they shall be again wanted.

[But should the milk have been suffered at any time to remain so long in the dish as to become sour, the wood instantly becomes tainted with that acidity, so as to act as a leaven upon any milk that shall be afterwards put into it, which never fails to coagulate without separating any cream, and can neither be employed in making butter nor cheese, and is consequently lost in the dairy. The scalding above described is by no means sufficient to remove this destructive taint; and as the dishes are totally useless till that be removed, the following more efficacious process must be adopted.

[Fill the vessel with water scalding hot, and into that put a considerable quantity of hot ashes and small red embers from the fire,

* The practice that prevails in many private families, of keeping the sweet butter among water in a crystal vessel, and thus serving it up to table, is for the same reason much to be censured. If coolness only is wanted, it were better to put the butter in a dry glass, and put that into a larger one among water. If it were taken out of that immediately before it were put upon the table, it would always have firmness enough in our climate.

Stir it about frequently, scrubbing it well in every part with the scrubber. Let this remain a considerable time; then empty the dish, scrub it as usual with scalding hot water, rinsing it well with hot, and then with cold water. Then fill it to the brim with cold water, better if that water can be made to run into it in a continued stream, and flow over the brim; let it stand in this state ten or twelve hours or more, after which wipe and dry it, and if the taint has not been very strong, it will then be fit for use.

[If the ashes of your fire should chance to contain very little salt, this operation may perhaps not prove effectual. In that case add a small proportion of potash along with the embers, &c., or quick lime may be employed along with the potash, which greatly adds to their cleansing power. But in all cases where recourse is had to this process, take great care that the dishes be well cleaned by the rubber at each time; and that cold water be allowed to stand a considerable time in them, which should be frequently changed, that the whole of the salts may be extracted by it before they be used again.

[The dishes for holding the cream, and the churn, require to be scalded, scrubbed, rinsed, and dried, after each time they are used, in the same manner as the milk dishes; but, as a sour taint is not here so prejudicial, it is not necessary to guard so carefully against it as in the milk dishes. But if ever this taint should become too strong, it may be diminished by the process above described.]

Premiums of the Philadelphia Society for Promoting Agriculture.

At a meeting of the Committee of Superintendence to offer Premiums and to designate the time and place for the annual exhibition of the "Philadelphia Society for Promoting Agriculture," held at the Philosophical Hall on the 10th of April, 1839,—the following members were present:

Nicholas Biddle, President; Dr. James Mease and Joseph Cloud, Vice Presidents of the Society; David Comfort, James Thornton, Dr. R. M. Huston, John C. Montgomery, and James Gowen.

The meeting organized by appointing Nicholas Biddle, Chairman, and James Gowen, Secretary:—Whereupon it was

Resolved, That the Committee consider only so much of the business referred to them as relates to crops, and premiums therefor, and postpone the consideration of the annual exhibition to a subsequent meeting.

To stimulate to laudable competition, and promote, as far as the Society has means, the advancement of Agriculture, the following crops were designated as most essential, and for which the following premiums should be offered. To wit:

For the best field of corn, not less than 5 acres, $10.

For the second best, $5.

For the best crop of potatoes, not less than 3 acres, $10.

For the second best, $5.

For the best crop of sugar beet, not less than ½ an acre, $10.

For the second best, $5.

For the best crop of mangel wurtzel, not less than ½ an acre, $10.

For the second best, $5.

For the best crop of turneps, not less than ½ an acre, $10.

For the second best, $5.

For the best crop of ruta baga, not less than ½ an acre, $10.

For the second best, $5.

For the best crop of field carrots, not less than ¼ of an acre, $10.

For the second best, $5.

For the best crop of sugar parsneps, not less than ¼ of an acre, $10.

For the second best, $5.

For the best crop of spring wheat, not less than ½ an acre, $10.

For the second best, $5.

Resolved, That Dr. James Mease, John C. Montgomery, and James Gowen be a committee to supply any omission in crops which should be regarded as worthy of premiums, and to publish the proceedings of this meeting. N. BIDDLE, Chairman.

James Gowen, Secretary.

Opinion of the celebrated Commentator, Dr. Adam Clarke, respecting

The Ox.

"Much increase is by the strength of the Ox."—*Proverbs*, xiv. 4.

The *ox* is the most profitable of all the *beasts* used in *husbandry*. Except merely for *speed*, he is almost in every respect superior to the horse. 1. He is *longer lived*.—2. Scarcely liable to any *diseases*. 3. He is *steady* and always *pulls fair* in his gears. 4. He *lives*, *fattens*, and *maintains* his strength on what *a horse will not eat*; and therefore is supported on one-third of the cost. 5. His *manure* is more profitable. And, 6. When he is worn out in his labor, his *flesh* is good for the nourishment of man, his *horns* of great utility, and his *hide* almost invaluable. It might be added he is almost *no expense* in *shoeing*; and his *gears* are much less *expensive* than those of the *horse*. In all large farms, *oxen* are greatly to be preferred to *horses*. Have but patience with this most patient animal, and you will soon find that *there is much increase by the strength* and labor *of the ox*.

The following article was published in the New England Farmer, in 1832. It is now revised by the author, and communicated for publication in the Farmers' Cabinet.

On the Reciprocal Influence of the Stock and its Graft.

BY. JAMES MEASE, M. D.

The opinion that the fruit produced by a graft is not in the least affected by the stock in which the graft is inserted, has long been held as an axiom in vegetable physiology, merely on the authority of Lord Bacon, who lays it down, "that the scion overruleth the stock quite, and that the stock is but passive only, and giveth aliment, but no motion to the graft." In other words, he considers the stock merely as a source of nourishment, to be communicated to the scion in the vessels of which it is to be decomposed or digested, and made to produce fruit in the time natural to the tree whence the scion is taken, and according to its peculiar kind.

I think I shall make it appear, that although as a general rule, the principle is correct which assigns a passive agency to the stock, yet on many occasions it has a decided influence not only on the vigor or fertility of the grafts, but also on the nature and quality of the fruit, and that a scion even affects the production of the stock.

1. The first proof I had on this subject, was given to me by the late Joseph Cooper, of New Jersey, an experienced and observing farmer and horticulturist, who in the year 1804, showed me two trees, both ingrafted with the same kind of apple by himself, and at the same time. The stock of one was the Campfield apple, a native and excellent fruit, that of the other was an early apple, and in both instances, the fruit produced by the graft partook of the flavor peculiar to the fruits of the stocks.

Mr. Cooper afterwards communicated to me in writing, his remarks on this subject, as follows: "I have in numerous instances seen the stock have great influence on the fruit grafted thereon, in respect to bearing, size, and flavor, and also on the longevity of the tree, particularly in the instance of a number of Vandevere* apple trees, the fruit of which was so subject to the bitter rot, as to be of little use. They were ingrafted fifty years ago, previously to 1804, and ever since, those of them which had tops composed of several different kinds, though they continue to be more productive of fruit than any others in my orchard, yet are subject to the bitter rot, the original and well known disease of the fruit of the stock. I have had frequent opportunities of observing the same circumstance, in consequence of my receiving many scions from my friends, which, after bearing, I engrafted, and the fruit uniformly partook in some degree of the qualities of the former, even in their disposition to bear annually or biennially.*

2. A correspondent of Mr. Bradley, (Mr. Fairchild) budded a passion-tree, of which the leaves were spotted with yellow, into one that bore long fruit; and though the buds did not take, in the course of two weeks, yellow spots began to show themselves about three feet above the inoculation, and in a short time afterwards, such spots appeared on a shoot which came out of the earth from another part of the plant. The publication of these facts is a proof of the candor of Bradley, inasmuch as they opposed his theory, which was similar to that of Lord Bacon, for he says, "the scion preserves its natural purity and instinct, though it be fed and nourished by a mere crab."

3. The late celebrated English gardener, William Speechly, regarded the stock as overruling the scion, and in confirmation of this opinion says, that "whenever a cutting is taken from an aged tree in a state of decay, and ingrafted upon a thriving stock immediately from seed, it may with propriety be considered as a renovation from decrepit old age, to youth and healthful vigor."† In his treatise on the culture of the vine, he adds, that "he had improved many kinds of vines, by ingrafting those which have generally weak wood on plants that are stronger."

4. Thomas Hitt, another well known English gardener and writer, says, "that the future vigor of trees depends equally upon the soil and stock, and that the tastes of the fruit may also be improved by proper stocks." Hence he gives very particular directions as to the selection of stocks for various fruits, and illustrates the necessity of attention to them, by stating the fact, that "if two nonpareil branches are grafted, the one upon a paradise stock, the other upon a crab, and both planted in the same soil and situation,

*This delicious apple is named "Vandevere," after one of the Swedes, who in the early settlement of the river Delaware, resided near Wilmington, about 27 miles below Philadelphia. It is supposed, therefore, that he brought the original trees from Sweden. The apple is of the middle size, redish, of a pleasant sweet and slightly acid taste, a combination of which renders it the best apple for tarts and pies. They are however, subject to a black spot, which increases with the growth of the fruit, and from its intense bitterness requires to be taken out before the apples are prepared for stewing. The disease is called the "bitter rot."—When first imported, the tree was called "*Staalcubs*," which may have been its Swedish name.

*[1839.—I have been recently informed by a country friend, that he has cured the bitter rot in his trees, by *pruning them when in blossom*. The advice was given by a German gardener. How to explain the fact is beyond my philosophy. The experiment ought to be first made by pruning the trees in the winter as usual.—J. M.]

†Hints on Rural Economy, London, 1821.

that upon the crab stock will produce fruit so sour and ill tasted, in comparison to the fruit of the other, that if a person should taste them both in the dark, he could not imagine them to be the same fruit."

"I have also," he says, "seen very great difference between the fruit of these trees, when one was grafted upon a paradise, and the other upon a codlin stock; for though the juices were so far changed by passing through the buds and pores of nonpareil branches, as to produce fruit alike in shape, yet their tastes were different, and somewhat resembled the taste of that fruit which the stocks would have naturally produced. The juices of the crab and codlin are known to be very acid, but the juice of the natural fruit of the paradise is sweet."* He adds, "as most kinds of apricots when fully ripe, are rather too sweet and mealy, so when they are budded upon any kind of plum stocks which have that sort of juice, their fruit becomes more mealy and sweet than those which were budded upon stocks, whose juices were more acid."

5. Mr. Thomas A. Knight, President of the Horticultural Society of London, in a paper "on the effects of different kinds of grafting"† observes, that "the form and habit which a peach tree of any given variety is disposed to assume, he has found to be very much influenced by the kind of stock upon which it is budded: if upon a plum or apricot stock, its stem will increase in size considerably as its base approaches the stock, and it will emit many lateral shoots: when on the contrary a peach is budded upon the stock of a cultivated variety of its own species, the stock and the budded stem remain very nearly of the same size, as well above as below the point of their junction. No obstacle is presented to the ascent or descent of the sap, which appears to ascend more abundantly to the summit of the tree." He also gives the following striking fact to demonstrate the influence of the stock upon the graft inserted in it. The "Moor Park Apricot tree in his garden, as in many others, becomes in a few years diseased and debilitated, and generally exhibits in spaces near the head of its stock, lifeless alburnum beneath a rough bark.—Sixteen years ago a single plant of this variety was obtained by grafting upon an apricot stock, and the bark of this tree still retains a smooth and polished surface, and the whole tree presents a degree of health and vigor so different from any other tree of the same kind in his garden, that he has found it difficult to convince gardeners who have seen it, of its specific identity."‡

6. Mr. Thomas Torbron, gardener to the Countess of Bridgewater, says, that "choice sorts of pears by being grafted upon the quince, come several years sooner into bearing, and produce much better crops, than those upon the common, or free stock. He adds that "the fruit will be in no respect inferior, and that he has had opportunities of seeing the superiority of the quince stock in three different counties in England."*

7. Among the extracts given by Sir Joseph Banks, from French authors, in the appendix to the 1st volume of the Transactions of the London Horticultural Society, it is stated that "the Crassane pear may be improved, and all its harshness destroyed by grafting upon the Doyenne: and that the Reine Claude plum is much improved, by being grafted upon an apricot or peach stock."

8. Bradley says, that "since the Jordan almond had been grafted on plum stocks in England, they bore very well, whereas, in the time of Ray, they seldom produced ripe fruit. Canary almonds, grafted on the plum, succeed well; while the seedlings of the same species, of five or six years' growth, appear all nipped and shrivelled."†

9. The "Spitzenburg apple," which originated near Albany, in the State of New York, is one of the finest apples of the United States. When I was in New York a few years since, I was informed, that the flavor of this apple is much influenced by the apple stock upon which it is grafted.

10. I have in some British publication read the fact, that a shaddock ingrafted on a sweet orange stock, will become sweet, and that the orange grafted upon the pomegranate at Malta, gave fruit which was red inside. I regret that I am not able to give my authorities for these two last facts. I find them in my common-place book, and would not have put them there, had I not been well persuaded in my mind at the time, of the high credit due to the source whence I obtained them.

11. Dr. Darwin says, "it is not certainly known whether the ingrafted scion gives, or takes any property to, or from the tree (stock) which receives it, except *that it acquires nourishment from it.*" He afterwards says, "there are no instances recorded, where a communication of juices from the graft to the stock, or from the stock to the graft, has varied the flavor, or the form of the flowers, or fruits of either of them. For though the same vegetable blood passes along both the upper and lower part of the caudex of the new scion, yet the molecules secreted from this blood are selected or formed by the different glands

* Treatise on Fruit Trees, 3d Edition, p. 46, London, 1768.
† Vol. ii. p. 199.
‡ London Horticultural Transactions, vol. ii. p. 20.

* London Horticultural Transactions, vol. vii. p. 213.
† On Gardening, vol. ii. p. 135.

of the part of the caudex which was brought with the ingrafted scion, and of the part of it which remained on the stock, in the same manner as different kinds of secretions are produced from the same blood in animal bodies." This remark is made in Sect. xvi. 4, "Of the Phytologia, or Philosophy of Agriculture and Gardening," nevertheless, in Sect. v. 2, of the same valuable work, when treating of the circulation of the juices of plants, and after quoting the experiments of Fairchild and Lawrence, Dr. D. says, "I think I have myself observed in two pear trees about twenty years old, whose branches were much injured by canker, that by ingrafting hardier pear scions on their summits, they became healthier trees, *which* can only be explained from a better sanguification produced in the leaves of the new buds. It has also been observed by an ingenious lady, that though fruit trees ingrafted on various kinds of stocks are supposed to bear similar fruits, yet that this is not accurately so; as on some stocks she has known the ingrafted scions of apple trees to suffer considerable change for the worse, compared with the fruit of the parent tree." This fact which I deem highly important, and worthy of the greatest attention, is to be coupled with that above related on the authority of the American rural philosopher, Joseph Cooper, and with those in Sect. 5, 8, 9 and 10. Dr. Darwin doubts the influence of the stock on the fruit or flower, or of the graft on the stock, because of the want of "recorded" cases in point, but he had forgotten that he had himself adduced two proofs of such influence, and had referred to two others.

12. In the second volume of the Transactions of the Horticultural Society, London, p. 44, Mr. Luttrel gives an account of several pears which were formerly cultivated; among these is the *orange vert*, or orange Bergamot. After describing it, he adds, "the true time to eat it, is whilst the color is upon the turn.—*The fruit colors most upon quince stocks.*" This is admitting the principle of the influence of the stock upon the fruit.

13. In the report of the Transactions of the Caledonian Horticultural Society, (May, 1829) Loudon's Mag. 5, p. 334, it is stated, that "the Society were put in possession by Capt. Smith, of Dysart, of an interesting account of the effect of introducing buds of the Ganges apple into branches of the Russian transparent apple, by the ordinary process of inoculation: the Ganges apple produced from these buds having acquired the peculiar transparency which characterizes the fruit of the stock; an effect, it will be observed, that goes to overturn the received opinion, that the produce of the bud is in no respect affected by the qualities of the stock."

14. Mr. G. Lindley mentions* among other plans to cause bad [fruit] bearers to be more prolific, the *use of different stocks;* and in his commentary on this position, he says, in proportion as the scion and the stock approach each other closely, in constitution, the less effect is produced by the latter; and on the contrary in proportion to the constitutional difference between the stock and the scion is the effect of the former important. Thus, when pears are grafted or budded on the wild species, apples on crabs, plums upon peaches, and peaches upon peaches and almonds, the scion is, in regard to fertility, exactly in the same state as if it had not been grafted at all; while on the other hand, a great increase of fertility is the result of grafting pears upon quinces, peaches upon plums, apples upon white thorn, and the like. In the latter cases, the food absorbed from the earth by the root of the stock is communicated slowly and unwillingly to the scion; under no circumstances is the communication between the one and the other as free and perfect as if their natures had been more nearly the same; the sap is impeded in its ascent, and the proper juices are impeded in their descent; whence arises that accumulation of secretion which is sure to be attended by increased fertility."†

15. I shall close this communication by a letter from Mr. Wm. Prince, of Flushing, Long Island, in confirmation of the principle for which I contend.

Flushing, March 18, 1830.

Dr. Mease:

Dear Sir,—You request that I would inform you, if I have, from my own experience, ascertained whether the stock of a tree has any influence on the graft so as to affect the quality of the fruit? In my father's time, I had often heard this subject discussed, and was led firmly to believe that the stock had no influence or effect whatsoever on the fruit ingrafted on it, but that some sorts of seedlings grew much faster and made stronger growths than others, and of course gave greater vigor to the graft, but the fruit I supposed would be unchanged. You may judge therefore of my surprise, when I was all at once convinced and satisfied that I had been in an error. Having found that the worm which

*A Guide to the Orchard and Kitchen Garden, London, 1831, reviewed in Loudon's Gardeners' Magazine, vol. vii. p. 581. I cannot permit this opportunity to pass without bearing my testimony in favor of this admirable miscellany, the circulation of which is immense in England and Europe. No gentleman who has the least taste for horticulture, ought to be without it. Seven volumes have been published.

†The Editor (John Lindley, the botanist) dissents from the opinion of his namesake, the practical gardener, and attributes the "improvement in the flavor of fruits *entirely to the increased action of the vital functions of the leaves.*" I shall adhere to facts.

See his remarks in the Gardeners' Mag., vol. vii. p. 584.

is so destructive to peach trees, would not touch the almond stock, and that the hard shelled almond raised from seed, do not like the original, produce handsome straight stocks, I had a row of young peach trees along the main walk budded to the almond at the surface of the ground, and when grown tall, budded again about five or six feet high to the old Newington clingstone, a fruit of a globular form. Passing by this row of trees two years after, when the fruit was ripe, I stopped to gather some, and to my astonishment, I found the fruit to be of an oval form; knowing I had budded them myself, from a bearing tree of the old Newington, and that the fruit now was oval when they should have been round, it struck me that perhaps the almond stock had caused the alteration; it occurred to me immediately, that there were some peach stocks in the same row where the almond buds had failed, and if there were fruit on them, and they retained their natural form, it would be a convincing proof of the almond stock having altered the form of the fruit. On examining the row, I found several stocks of peaches inoculated the same height as the almonds, with fruit on, which retained their usual round form, when all on the almond stocks were oval, and very much so, that the difference was so plain, you would have thought them a different fruit, but the color and flavor were the same. I went immediately to my brother who lived then at a short distance, and told him of it, but he could not think it possible till he went and saw it himself, and was then satisfied of the fact. I have been thus particular, that you may see I can have no doubt in my mind.

The New England Farmer, April 17th, 1829, in an article signed J. W., and dated at Weston, mentions, respecting the effect of the stock on the graft, that a red apple becomes of a more brilliant red when grafted on a stock that produces red fruit; a green or yellow apple stock diminishes its beauty, and that he had seen scions taken from one tree and set in pale green and in red apple stocks, and that the apples they produced bore no resemblance to each other on these two trees.

The farmers on Long Island, in King's county, have been so well satisfied of the influence of the stock on the graft for some years past, that they procure stocks of the largest green apple to graft with the Newton pippin, so as to have large fair fruit. Life seems too short for experiments that require many years to bring them to perfection, as I observed above thirty years ago to Fisher Ames, who was very curious in fruit. I then stated to him what Mr. Knight is now bringing to perfection, that fruit like pigeons, (as the pigeon fanciers say) might be bred to a feather by mixing the farinæ and planting the seed, then repeating the same on the new plant, but the time necessary to carry such experiments into effect was enough to discourage any one from attempting it. I shall however have some experiments tried to ascertain whether the old French method of grafting in and in, will change the form and flavor of fruits, for after what I saw myself as above stated, I am now convinced it will.

I have now to state to you what I have never met with in any author, *that the graft has an influence on the stock and root* of the tree. The cherry tree when the thermometer in hard winter falls much below zero, is frequently killed by the severity of the frost. I had some years ago, 1821, a number of cherry trees killed, but the weeping cherry, a native of Siberia, although budded some height from the ground, remained uninjured; this led me more minutely to examine their roots, and I found invariably, that the roots of all the weeping cherries differed from the roots of other cherry trees, although the stock was the same; the roots of the trees grafted or budded with the weeping cherry being much fuller of fine spreading fibres, and rooting much stronger. Mentioning this fact to a man who keeps a small apple nursery in this place, and on whose veracity I could depend, he told me that the graft of the Siberian crab apple trees, although grafted two feet from the ground, affected the roots, and caused them to become so wiry and hard, and so full of these fine tough fibrous roots, and that they were very different from the roots of other apple trees.

I have now given you all the information I possess on this subject.

Yours, respectfully,
Wm. Prince.

Restoring Peach Trees.

When I removed in the spring of 1834, to the house where I now reside, there stood in the back yard a dwindled, yellow leafed, sickly looking peach tree, which I was disposed to cut down. It was however spared at the request of other members of the family. Early in the summer the fruit ripened prematurely—were bitter knotty things, and scarcely fit for any use. I again resolved to cut it down, but upon further consideration it occurred to me that it afforded a fit opportunity for experiment. I accordingly took the earth away from it, and exposed the roots to a considerable depth—upon examination I found the bark for some inches below the surface infested with masses of worms—from the thickness of a straw to that of a needle. All of these I endeavored to remove, and carefully cut out all the diseased parts of the bark and wood. After this I took hot soap suds very strong, and poured it plentifully about the

roots and diseased parts of the tree. A short time afterwards, either the same day or a day or two after, I took thick white-wash and coated those parts well with it, and then left it exposed to the action of the weather until the winter set in, when I filled in the earth about the roots. The next spring the tree evidently bore a more healthy appearance, still there was here and there a curly leaf; but the fruit was still bitter—prematurely ripe and imperfect. The past summer however, the second since the process, it has been as flourishing as any tree I have ever seen, has grown surprisingly, and borne an abundance of large fine peaches of a good flavor. I have no doubt but that a similar course will be found successful, in nine cases out of ten, in restoring peach trees to a healthy flourishing condition—after they have begun to exhibit strong marks of decay. The whole process cost me little more time than I have now spent in describing it.

LIME.

To the Editor of the Farmers' Cabinet.

Admitting, as stated by your correspondent, that the question of the septic or antiseptic properties of "lime is a matter of fact, and not a matter of reasoning," yet where there is difference of opinion, it seems, that in order to arrive at the truth, some reasoning or discussion must precede, and not always "follow" its acquisition. After facts are once discovered and determined beyond doubt, reasoning is at an end, except upon the consequences or bearing of those facts. That the antiseptic influence of lime in its usual application in the soil, is not a well settled, undisputed fact, is proved by the directly opposite opinions of many able writers, who have maintained that it promotes decomposition of the vegetable matter in the soil. The question is one of no little moment to the farmer, that he may rightly understand its best application.

There seems to be some misunderstanding between your correspondent X, and myself, owing perhaps to the indiscriminate use of the word *lime*, without specifying whether quick lime, or carbonate of lime is intended. I have stated that when quick lime is applied to a soil, it has a tendency to dissolve and decompose its inert and insoluble vegetable matter, thus making it suitable food for vegetables, whose absorbents receive it in a state of solution. The *only parallel case out of the soil*, where this can be determined by experiment, is by mixing certain quantities of vegetable matter with certain proportions of quick lime, subjecting it to the action of air, water, &c., imitating the circumstances in which it is usually applied by the farmer, and it is believed it will be found that decomposition is hastened by the lime. Quick lime will not long remain without reuniting with carbonic acid.—In the soil it meets with its natural affinities, oxygen and charcoal, and in the process of uniting, has the decomposing agency before alluded to.

Salt is a powerful antiseptic, and yet when applied in particular quantities, acts with great vigor in an opposite way.

It is freely admitted now, as before, that white-washing will preserve a fence or a roof, but the circumstances are different from those of the soil. I was no little surprised to observe, that X, in the latter part of his last communication, "says, he has expressed no opinion about lime before it becomes a carbonate." If so, his train of argument is singular. In order to prove, then, that carbonate of lime has a certain effect, he adduces divers instances, of fences, roofs, rail-road timber, and dead horses; in all which cases the quick lime is used, and not the carbonate. Does he not admit there is a substantial difference between them. I had supposed that in the annual white-washing to embellish and preserve my fences and out houses, it was the "*alkaline solution*" obtained from quick lime, that was the desideratum, and not a mere *mixture* of carbonate of lime and water. The same in the case of rail-road timber. If X has been referring all along to the carbonate of lime, his references to the use of quick lime are not available to his argument.

My time is much occupied, or I would quote from numerous agricultural writers to corroborate my opinion of the decomposing agency of lime, and that the most profitable application to the land, is to get it on soon after being slacked.

I hope when X has concluded his experiments, "in which he has been some length of time engaged," he will transfer his "accumulation of facts" to the pages of the Farmers' Cabinet, so as to set at rest this mooted question. The great number of communications on lime, from so many of your correspondents, shows the great interest felt in the subject, as well as its vast importance. To sustain X's theory of lime, it seems necessary, *a priori*, to confirm what I very much doubt, his view, that the nutriment in the soil is disengaged *faster* than it can be taken up by plants, and is dissipated and lost. If this latter is not the case, and the former is correct, lime may be detrimental. I have only time now for one remark more. Sir H. Davy in his Agricultural Chymistry states that lime combined with carbonic acid, becomes insoluble. Joseph Cloud, Esq., in the last of his valuable communications says, "its union with carbonic acid greatly increases its solubility."

East Bradford, April 8, 1839. M.

For the Farmers' Cabinet.

Management of the Thorn.

I some time since noticed an article in the Cabinet on the English Thorn or Hawthorn, (page 92, vol. 3.) With this variety I am not acquainted, and of course can say nothing respecting it. But I have had considerable experience for thirty years, and have paid especial attention for the last twenty years to the *black* or *New Castle*, the *white*, and the *Virginia thorn*. The New Castle thorn has been in use from my earliest recollection.—The Virginia, was introduced into this neighborhood about twenty years since. I gave this species a fair trial, but it did not answer my purpose, and I abandoned its cultivation. I prefer the New Castle, which is now very scarce. I have generally obtained my supply from the neighborhood of Salem, N. J., for which I have been charged eleven dollars per thousand. My method is to let them remain in the nursery for two or three years, or until they are fifteen or twenty inches high. I generally plant in the line of a fence, as affording security to the plants. I dig a trench as wide and deep as the width and depth of our common spades; and if the soil is thin I put a little manure in the trench, after which I plant the quick fifteen inches apart, which I find close enough. When they require a dressing, instead of hoeing I throw some fresh earth around them, and continue this practice whenever a dressing appears necessary, until I have a bank two or three feet high from the top of the trench. I never cut them off as some recommend, but let them grow as tall as possible. It is a great fault with many to lay them too young, and trim them too much. They ought not to be laid until they are two inches in diameter, and then cut as close to the ground as possible, or sufficient to bend them. I lay them two or three feet high, or rather, trim them off to that height. I prefer dead stakes, and lay them fair over the butts of the others; the young shoots will sprout from the butts, and all along the bodies, so that in two or three years I have a fence which no bullock or other animal can possibly pass. In the month of August (it will answer later but not so well) I take what we call a stock knife, affix it to a handle, and trim the long shoots. This must be done once a year, or the hedge will be ruined. I know not how long the large wood of the thorn will live—I have some now varying from ten to fifteen years which look as well as at first, and so well set that the heaviest ox cannot penetrate, and so compact that a rabbit can scarcely make its way through.

A New Castle Co. Farmer.

Science has no enemy but ignorance.

For the Farmers' Cabinet.

Farmers' Cabinet—Manure—Improvements—Lime, &c.

Mr. Editor,—Being solicited last summer, by our worthy post master, to become a subscriber to your valuable publication, I at once assented, and being at our post office (North East) some time after on the arrival of the mail, I was surprised at the large number of your Cabinet sent to our small district; I have not a doubt but all your subscribers have a desire to improve, as far as practicable, in their mode of farming. Indeed I do not think there can be one among us who is not ready and willing to acknowledge that there is great room for improvement. I fully believe that had such a publication the same circulation for the last 10 or 15 years in our country, as the Cabinet now has, that there would not be so many of us now farming *worn out fields*, that barely produce enough to pay for *gathering the crops*. Now, as the Cabinet is continually enforcing upon us the value and importance of saving, making, and applying MANURE, a thing that appears only to be a secondary object amongst the best of our farmers, and indeed no object at all with too many of us, to give you a detail of the plan generally adopted here, would be useless, as the old *Maryland system* of cropping and cropping, one crop after the other, as long as a sprout will grow, to our shame be it said, is still much in practice with us, as may be seen at any time by passing through some parts of our country. Now, Mr. Editor, as we generally farm more ground in proportion to the stock we keep, than your Pennsylvania farmers, and then make much less manure, with the same proportions, it is a matter of course that we must do something more for our land than apply our small proportions of manure, if we expect to be repaid for our labor, as from our mode of farming of course our means must be limited, therefore the object is to get, at once, at the best and cheapest plan of improving our long neglected and abused fields. It seems to me as if I can hear you and your host of readers all cry out at once, *lime*, LIME! Well, some of us, at least, have limed, and the result is, that either the lime is so poor, or the manner it is applied so bad, that the improvement will not warrant the labor and expense. For my part, I attribute it to the almost entire worthlessness of the article called lime that is put on us ignorant, easy, good-natured sort of people, as I think we are generally supposed to be. There are men who make it a business (and a profitable one too, I judge,) in bringing lime into this part of the country,—it is what they call fallen lime.

I begin to suspect that the greater part of it is nothing more nor less than the refuse

of the kilns in your great limestone regions on the Schuylkill—lime that is thrown out perhaps in small quantities, from time to time, and is exposed to the weather for months, and some for years, until it collects in quantities, and then perhaps these lime merchants that trade with us are paid for taking it away, and they bring it to us easy, good-natured folks, and we take it at a high price, just because we know no better.

Now, sir, I am of the opinion, if any of us had the means, or enterprise, to take a trip up in your limestone country, on the Schuylkill, we would find that we could get the prime article, good stone lime, for about (or perhaps a trifle more) than we pay for this poor stuff. As there is no doubt but the Cabinet is circulated extensively through your limestone country, perhaps some of its readers, who make it a business, will inform us if they have not boats for carrying stone lime, and what they could deliver it for at different points. There is a great extent of country here, on the Elk, North East, and Sassafras rivers, mostly within a few miles of the Chesapeake and Delaware Canal. It is a business which, if once properly commenced, must prove very advantageous, both to the farmer and limeburner. A CONSTANT READER.

Elk Neck, March 28th, 1839.

"A Constant Reader" is advised to take a trip up the Schuylkill, purchase his lime at the kiln, so that there may be no mistake; and then apply it, as the quality of the lime and the nature of the soil may justify. We recommend to our correspondents and readers, who wish light on the subject, the very interesting communication of R. M. BLACK, Esq., in the 8th No. of the present volume of the Cabinet, and that of "Evelyn," see page 248. These are both very important papers, as the facts are stated very minutely.

For the Farmers' Cabinet.

Advantages offered to Agriculturists in Maryland—Would-be-Emigrants, who want more Land, read and reflect.

MR. EDITOR,—I observed in the January number of your paper, a few queries propounded by "An Old Subscriber," on the comparative value of the investment of money in good steady 6 per cent. stocks, and in land. Although I do not feel prepared to give in detail a satisfactory statement, as requested by your correspondent, yet, with your permission, I will trouble you with a few remarks bearing upon the point at issue.

It will be admitted, for it must be evident to every reflecting mind, that the decision of the question, whether stocks or land afford the most profitable investment of money, will depend mainly, if not entirely, upon three things, viz. *the price at which land can be purchased—the price for which the produce will sell, and the price to be paid for labor.*

Now, although it may be a fact, (but of this I am not prepared to say,) that the investment of money in land, in the neighborhood in which your correspondent resides, *i. e.*, Philadelphia, where land is very high, from $100 to $200 per acre, and labor in proportion, may not be as profitable as 6 per cent. stocks; yet I am of opinion that in other sections of country, where land equally good can be purchased for one tenth the above sum, the price of produce equally high, and the price of labor considerably lower—the investment of money in land would be much more profitable.

If I am correctly informed, all the land in Pennsylvania, within 50 miles of Philadelphia, which is at all improved, is held at from $50 to $150 per acre. Now I would advise those who hold such land, and also your correspondent, to extend their views a little beyond the good old state of Pennsylvania, and take a view of the lands in Maryland, in the counties bordering on Pennsylvania, particularly in Harford county. It is the opinion of many that lands in this county are lower, all things considered, than in any other county in the state; and there is in the county some land as good as is to be found in any part of Pennsylvania. The lands lying on Deer Creek are held higher than in any other part of the county. Here, latterly, some small farms of prime quality, highly improved, have been sold at from $50 to $75 per acre. This land will produce, on an average, from 20 to 30 bushels of wheat, and from 40 to 60 bushels of corn per acre, without manure. Wheat is the principal product, to which the land is peculiarly adapted, and the flour manufactured from it is preferred by your bakers. In proof of this fact, I would refer you to the firm of Messrs. Lee, Benker & Co., of your city, who are the principal agents in the sale of the article.

The above mentioned is the highest price at which land is held in this county. But there are many farms on Deer Creek, and within 3, 4 or 6 miles of it, which can be purchased at from $5 to $25 per acre. These are, of course, somewhat inferior to the first mentioned in quality, but with a little care, and by the application of lime, can be made to produce as good (and perhaps better) crops than the lands in Lancaster, Chester, and Philadelphia counties, which are daily sold at from $100 to $150 per acre. When the Susquehanna Canal to tide is completed, it is supposed that lime will be delivered at the

mouth of Deer Creek, that is, within 6 or 8 miles of the land of which I have been speaking, at 12½ cents per bushel, and it is a point settled with us, that money laid out in lime, even at 25 cents per bushel, delivered, will be returned, by the increase in the product, in two or at most three years. Lime then will not add any thing to the price of the above land. Now let us see what would be the consequence if one of your Chester or Philadelphia county farmers should sell out and purchase here. We will suppose he could purchase here for $15 per acre, and put on $10 in improvements, which is $25. If he could sell out for $100 per acre, he could purchase as much land for one-fourth the money; and if produce is equally high here, if he could make *six* per cent. *there*, he would make TWENTY-FOUR per cent. *here*.

I propose to show that the market for the product of the farm is as good here as in Philadelphia.

By reference to the February number of the Cabinet, I perceive that grain is quoted as follows, viz: Wheat, $1 73 to $1 80; corn, 86 to 91 cents; oats, 45 to 46 cents; clover seed, $13 to $14. The price of these articles here is as follows: Wheat, $1 70 to $1 75 cents, and can be sold readily, by delivering it from three to eight miles; corn is now selling at 90 cents to $1, with many buyers, although the crop here was large last year; oats are a very ready sale at 50 cents, and clover seed at $15 per bushel. Labor can be had here at from $8 to $10 per month —free laborers—slaves for less—which I believe is lower than the price in the counties bordering on Philadelphia.

I am convinced, that with the same *management* and *economy* here as is evinced by the farmers of Pennsylvania, we should all get rich fast. We want some of them to set us an example in these respects. We are confident they would not regret their removal. Will not your "Old Subscriber," should these lines meet his eye, be induced, at least, to pay us a visit, and we think, if he has any idea of an agricultural life, he will be induced to sell out his 6 per cents. and invest the proceeds in good 24 per cents. in Harford county, Maryland.

A Young Farmer.

Churchville, March, 1839.

When the wind is in the west,
The weather is at the best;
When the wind is in the east,
It is good for neither man nor beast;
When the wind is in the south,
It blows the bait into the fishes' mouth.
No weather is ill, if the wind be still.

An evening red, and a morning gray,
Is a sign of a fair day.

We copy the following article on Ploughs from a late number of the Boston Cultivator. It is from the pen of the Editor, a practical farmer.

Ploughs.

"For some years past we tried to procure a cast iron grass plough that would completely subvert the sod, and cover the vegetable growth without the aid of the foot to help the furrow over. We at length found by accident a set of irons that came nearer the mark than any we had seen. We directed the wood part to be made, and the plough performed better than any we had found.

"With this plough, and one yoke of steers, four years old, our boy of sixteen contended for the first prize for single teams, at the Concord cattle show in 1836; and he won the prize, though nine other teams were in the field. He laid his furrows best, and he finished his lot three furrows sooner than any competitor—having been twenty-seven minutes in ploughing the lot marked out—nearly one-fourth of an acre. We had then never seen Prouty & Mears' ploughs. This firm, No. 19 North Market street, and No. 19 Clinton st., [and also Prouty, Libby & Prouty, at their Agricultural Ware-House and Seed Store, No. 87 North Second st. Philadelphia] have constantly been improving upon their ploughs, and, as we think, have brought them to perfection—they have grass ploughs of a most finished pattern—long ones for plain, deep ploughing—and shorter ones for rough lands. A practised eye can see at a glance that their long ploughs cannot fail to raise the furrow easily, and to turn it completely over—the furrow rises gradually and does not break in falling over—the falling portion, therefore, assists in helping up the rising portion—so that the whole operation consists in cutting and rolling over the sod—saving all the labor of lifting it up, or of crowding it away one side.

"The labor of this plough compared with many others, is like the labor of rolling over an even log compared with that of rolling over a square stick of timber. The cutter stands inclining to the right, and the whole shape of the plough indicates the ease with which it will operate. The draft is what is called the centre draft, and both sides of the plough are carried along together and with perfect ease. Their long ploughs incline to the right side, and the furrow slice is so cut, in bevil shape, that it shuts in completely, like a trap door, and covers up all the vegetable matter on the surface.

"We are much gratified with the sight of so perfect a plough. It must be a treasure to all who think it important to plough well—by far the most important operation in farming. Land once well ploughed in the spring is al-

ready half-tilled, and all the subsequent operations are easy.

"How often do we pass by and see—not farmers, but rooters, tearing up a beautiful lawn and leaving it piled in heaps and ridges merely for the want of an instrument that may be called a plough!"

A recent number of the New England Farmer contains the Report of Inventions, made at the last annual meeting of the Massachusetts Agricultural Society. We make the following extract, from which it appears that the first premium was awarded to Prouty & Mears' plough.

"The implements for which premiums are now claimed, are entitled to much credit for their simplicity and economy, the ease with which they may be used, and the facility with which they may be repaired when necessary.

"The improvement already made in the construction of the plough, and the study of the principles on which it should be made, justifies the conclusion, that it is better economy for the farmer to keep three ploughs, adapted for specific purposes, than two of the same construction, differing only in size, as has heretofore been most common.

"The sward plough of Mr. Prouty, to whom the offered premium of twenty dollars is awarded, appears to have been the result of continued attention and minute observation, with practical skill as a farmer in the use of the plough, as well as mathematical calculation in the principle of its construction, as will appear by the letter of Mr. Prouty, recommended to be published. In the Yankee Farmer of the 28th April, 1838, there is a communication headed "Ploughing and ploughs, by E. P. of Lexington," giving a very particular description of this plough, which was highly gratifying to your committee."

Farmers who visit Philadelphia are requested to call and examine the ploughs referred to above, at No. 87 North Second st.

Root Crops.---Farmers Attend.

The scarcity and dearness of beef cattle seem to offer a fit occasion for us to urge upon our agricultural friends the propriety of putting in a few acres of roots, in addition to their usual crops, for the purpose of feeding their cattle, as every plan which can be adopted of *saving* the grain crops should be an object with them, provided that in so doing they can effect a *saving* of time, labor, and money.—Now as we believe all this can be done by the plan we are about to urge, we trust it may be favorably considered, and carried out, so far at least as to make a fair experiment of its utility. From various experiments made, it has been reduced to a certainty that one thousand bushels of *mangel wurtzel* or SUGAR BEET can be raised from an acre of well manured land, and this number of bushels will not be considered large when we state, that it will only require that these roots should weigh three lbs. each to give us this quantity, and that they have been raised to weigh 22 lbs. For milch cows they are peculiarly well adapted, [especially the Sugar Beet] and if given out to them in the quantity of half a bushel a day, in two meals, say night and morning, in addition to their usual quantity of hay or fodder, will, during the winter and spring months, add seveny-five per cent. to their product in milk and butter, besides greatly increasing the richness and flavor of both. A half bushel a day from the 1st of December, till the first of May, a period of 151 days—will at the rate of a thousand bushels to the acre carry 13 cows well over the whole period of time named, and leave them at the date named in excellent condition. As to the mode of keeping beets, no other care is necessary than is usually given to the preservation of potatoes or turneps. In proof of this we have sugar beets now, this 19th day of April, that have been kept in a dry cellar, unprotected by covering of any kind, that are now as sound as the day they were taken out of the earth, having preserved unimpaired all those qualities which render them a delicious table beet. Having stated the capacity of an acre, and shown as we trust conclusively, that it is competent to be made produce enough to sustain 13 cows from the first of December until the first of May, we would ask, to what else could an acre of land be appropriated that would do as much? *We know of no crop that would prove as profitable, and, therefore, urge the propriety of a trial upon every farmer and planter: They may be planted from the present period throughout all May, and with proper manuring and culture will produce what we have stated.*

In fattening beef cattle, if given in the quantity of a bushel a day, divided into four meals with the usual quantity of hay or fodder, they will prove eminently efficient, and save a vast quantity of corn. Should their culture be adopted, there is no farmer that could not raise four times as many cattle for the butchers as he now does, as one acre in such culture will give him the material for fattening seven head.

The above is from the Farmer and Gardener, and we join the Editor in earnestly recommending to our farmers a fair trial of the

roots named. What is done must be done quickly. There is no time to lose; and if properly attended to "there is no mistake." Let every farmer put in an acre of each.

To prevent Sheep catching cold after being Shorn.

Sheep are sometimes exposed to cold winds and rains immediately after shearing, which exposure often hurts them. Those farmers who have an access to the sea, should plunge them into the salt water; those who do not have that opportunity, and whose flocks are not very large, may mix salt with water and rub them all over, which will in a great measure prevent any mishap befalling the animal, after having been stript of its coat.

It is very common in the months of June and July, for some kinds of sheep, especially the fine Leicester breed, which are commonly thin skinned about the head, to be struck with a kind of fly, and by scratching the place with their feet they make it sore and raw. To prevent this, take tar, train oil and salt, boil them together, and when cold, put a little of it on the part affected. This application keeps off the flies, and likewise heals the sore. The salt should be in very small quantity, or powdered sulphur may be used instead of it.

From the Genesee Farmer.

A good Crop of Millet.

Mr. Tucker,—A few days since, Mr. A. Tinckelpaugh, of Wayne county, called at the seed store with a quantity of very fine millet, and on making some inquiries of him respecting this crop, he gave me the following account, which, as the result of an experiment, is worth recording, and may be interesting to some of your readers.

Mr. T. said he had seen in the agricultural papers some flattering accounts of the millet crop, and therefore determined to give it a trial. He selected for this purpose two acres of new land, such as is termed good corn ground, being a rich sandy loam. It was only ploughed once, and well harrowed. The seed was sown the 3d day of June, at the rate of seven or eight quarts to the acre, and harrowed in. The crop grew finely, and was cut on the 15th day of August. It was threshed by a machine and yielded 160 bushels of clean grain, or 80 bushels to the acre. The straw made excellent fodder for cattle, and was worth more than two acres of good grass hay. Mr. T. fed out most of the grain to hogs, and considers it worth as much for feeding as the same weight of corn or peas. It weighs about 50 lbs. to the bushel. When ground into meal and mixed with cooked vegetables, &c. it is a very superior food for fattening hogs. And on the whole, Mr. T. considers it a most valuable and certain crop.

Yours, M. Bateman.

Rochester Seed Store, Feb. 20, 1839.

For the Farmers' Cabinet.

The Season—Importance of Accounts—Corn—Garden—Millet.

Mr. Editor,—So far the season has been remarkably fine, and every thing around us looks smiling, and gives ample promise to recompense most abundantly the well directed labors of the persevering and industrious husbandman. But it invites not to repose. The farmer must bestir himself, for at this season, when so much depends upon the proper economy of time, and the judicious application of labor, he has no leisure hours. A multitude of matters require prompt attention, and the most minute cannot be overlooked with safety. System is as necessary in the management of the affairs of a farm as in those of the state—and neither can be properly and honestly managed without it. One of the great aids in the good work of system, and the farmer will assuredly find it so, is the keeping of a MEMORANDUM BOOK, in which every thing done or to be done should be punctually and carefully noted. Follow this plan rigidly and it will not only prove satisfactory, but absolutely and highly profitable. But I would not have my brother farmers stop at a memorandum book—they need a regular set of books, in which all their daily transactions shall be entered. I began this system late in life—I see my error now; but am determined to tax my punctuality now and hereafter for my past neglect.—I keep a regular daily journal and ledger; into which all my transactions are carefully noted, all my expenses, sales, &c. I have an account opened with each field—stock, swine, sheep, &c., if I purchase or sell, plough, plant, reap—all is regularly entered, and that on *the very day.* I may hereafter send you a transcript of a page or two of my books. At all events, I hope the subject will not be permitted to slumber, but that keep accounts!—*keep accounts!!* KEEP ACCOUNTS!!! will be rung in the ears of our farmers until they all commence the good work in real earnest.

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CORN.

This great staple article will require great attention. The thrifty farmer will see to it in season. All that is planted will not come up, and in many instances where it does shoot up, it is cut off by accident or other causes.—To guard against this, and fill up the gaps, I find *transplanting* preferable to re-planting; and there is no difficulty in this, as there is generally a surplus of plants. Great care should be observed in taking up the stalks for

transplanting not to injure the roots, and to retain about them as much of the soil as possible. The after culture of corn requires very particular attention. The earth must be kept open or well pulverized, and free of weeds; as it is impossible to get two full crops, one of weeds and the other of grain, from the same ground at the same period. The cultivator is well adapted to the after culture, as it does not injure the lateral roots, and opens the earth for the action of the sun and air. Of late years I have followed the plan of planting my corn in rows, and I think it a decided improvement. One of your correspondents said, some time ago, that "of all things to make grass grow, ashes beats." This opinion I endorse; and would observe that the virtue of ashes is not confined to the making of grass grow; but that applied, pretty liberally to corn, say about the first week in May, it has a very beneficial influence. At least such is my experience.* When I introduced the use of the cultivator, I abandoned the old practice of hilling up.

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THE GARDEN.

A well filled and well cultivated garden, is an indispensable appendage to a farm. Indeed, I never yet saw a good farm, where was not to be found a garden equally good. I suppose you have attended to this important part of the duties of a good husbandman and kind father—that the heaviest of the work has been accomplished, and that the females of your family will attend to the remainder.—You will therefore reap the pleasures and advantages, and they are many, of a little forecast and attention.

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MILLET.

This vegetable I find stands the drought exceedingly well, and flourishes like lucerne, best in a light or sandy soil; but like other crops it has its advantages and its drawbacks. It is stated in a work on agriculture, that a gentleman in Pennsylvania, sowed a peck to the acre the last of May—sowed four acres—cut middle of August, and suffered to dry in the sun for two or three days—produce 75 bushels of seed, and one and a half tons of fodder to the acre. Cattle relish it. The produce per acre is frequently much greater than stated above. It is often cut in the milk. It is first sown in drills about three feet apart, and the plants should stand six inches from each other in the rows after hoeing. In this latitude it may be sown from the middle of May to the 20th of June.

DAVID HILL.

Amwell, N. J., April 27th, 1839.

*Would it not be best to apply the ashes as soon as the corn is up.—Ed?

Sugar Beet—Ruta Baga—Mangle Wurtzel.

The rapid extension of the culture of these roots in this country must be matter of gratulation to every thorough agriculturist; to the grain grower, the breeder of cattle, and the grower of sheep. All are deeply interested, and all will find themselves benefited by the culture. In enriching the soil—in affording the means of augmenting the number of stock on a farm—for fattening cattle and sheep at all seasons when they are grown, and for bringing all animals in good condition through the trying months of our winter and spring, the root culture will be found unrivalled.—We wish for no sudden innovations in farming:—but the root culture in this country has ceased to be an experiment, and every farmer may safely enter upon the process of providing an ample supply of green and grateful food for his flocks and his herds at a season of the year when it can be furnished from no other source.—*Geneva Gazette.*

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SOIL FOR THE SUGAR BEET.

1. A deep rich loam is best; but any soil that can be made mellow, will answer well. A very dry soil does not yield so large beets, but sweet and nutritious ones. The soil should be free from stones, and well pulverized to a good depth, that the root may pierce it freely and grow smooth and handsome. 2. South of the 42d deg. of lat. they should be planted from the 25th of April to the 10th of May, certainly not later than the 15th. (!) 3. Plant in rows 24 or 30 inches apart, and leave the beets ten inches from each other in the rows. The ground should be thoroughly prepared and well manured. Before planting, pour warm water on your seed, and let it soak *at least* 24 hours, and no matter if three or four days. 4. The weeds must be kept down, and the soil very mellow, by the use of the plough, cultivator or hoe. Thin early, so as to leave one only every 10 or 12 inches. 5. Gather as soon as ripe, *i. e.* as soon as the lower leaves begin to turn yellow and fall off. They are easily preserved in cellars.

For the Farmers' Cabinet.

The Cut Worm.

In the year 1836 I cut from a country newspaper an account of a method adopted in New England of destroying the cut worm. I was rather sceptical, and although it was in my possession two seasons, and I a sufferer, yet I did not try it until after I had become a subscriber to your valuable Cabinet, reading which, stimulated me to look more closely after my interests, and calling this old receipt to mind, I determined to try it last year, which I did to my entire satisfaction. It acted as a charm. Great caution is necessary, for

if the brine is not sufficiently diluted, its application will prove as hurtful as the ravages of the worm itself. All it requires is care. Now for a copy of the receipt:

"A friend assures us that he succeeded in destroying cut worms by watering grounds infested by them with brine, in which hams had been preserved, *diluted with a large portion of water.* In his first application he destroyed some of his vegetables as well as the worms, in consequence of using the brine too strong. In succeeding trials, by diluting it sufficiently, he attained his object, and destroyed the worm without injuring the vegetable."

Now, what I am at is to request my brother farmers to try this method this season on a small scale. No injury can be done, if only proper care be observed; but on the contrary, much good will result. There have been many contrivances for the destruction of this pest of the farmer. I have heard of one by Parke Shee of Delaware county, but have no personal knowledge as to its capabilities of answering the purpose. I find it described in the Farmers' Cabinet "as a pair of old wheels from a cart or wagon, fitted with several projections, similar to the cogs of a spur wheel, formed so as to impress in the earth a hole (continuous) four inches deep. The smooth track the wheel makes on the soft ground induces the worm in its nocturnal wanderings to follow on until it tumbles into the pit, where as it cannot climb out, it perishes by the influence of the succeeding sun." Perhaps some of your readers may be familiar with this method; if so they will confer a favor on at least one farmer by communicating through the Cabinet, some account of it.

J. S. Y.

Yardleyville, 4th mo. 26th, 1839.

For the Farmers' Cabinet.

Root Crops—Root Cutters.

Within the last few years a complete, and from present appearances, a permanent change has been effected in the agriculture of our country, by the introduction of the *root culture.* But all improvements, and especially those in the farming way, make head but slowly, against the established principles and strong prejudices of the people; unless indeed they become infected with a mania such as now unhappily pervades our country in regard to the growing and sale of mulberry trees. I have steadfastly resisted the solicitations of my friends to engage in the speculation, and make a fortune. On the contrary, I find enough to do to attend to my small farm of eighty acres—it affords me every thing I need for the comfort of myself and family, and by care and economy we have been enabled to lay up yearly something beyond our expenses, besides affording to my children a good serviceable English education. But this is more particularly the case, since I began to think for myself, and commenced the raising of roots for market and the feeding of stock.

Last season I put in eight acres of potatoes, the ground was well prepared, and limed, stirred frequently through the continuance of the drought, and kept neat and very free of weeds; and the result was, that after deducting all the expenses of cultivation, interest on the land, and transportation to market, &c., I realized a profit of three hundred and ninety-one dollars, besides a full supply for my family during the season. It should be remembered however, that potatoes were scarce and very high—probably the same quantity, under more favorable circumstances, in the market would not produce as much by one hundred dollars.

Four acres were also put in, 1¼ each of ruta baga, mangle wurtzel, and sugar beet.—It was my first experiment with the sugar beet. The yield in neither case was equal to my expectations, as to *quantity*, producing not more than 470 bushels per acre on an average. But the general result was highly satisfactory; and I am perfectly satisfied that the four acres in roots for my stock, was better than six acres in corn. A large amount of leaves were taken during the season and fed to the cattle and hogs, and they were devoured with great avidity. I derived benefit in various ways. My manure was greatly increased—the quantity and quality of milk and butter vastly enlarged—my land is left in a good state, and above all, my stock came out of the winter in a much better condition than ever before; and I am satisfied that I can keep one quarter more stock now in much better order than I did before, and to greater profit, on the same amount of ground; and all this by the introduction of roots. No one will suppose that my stock was fed wholly on roots—they were constantly supplied with excellent hay, of which they eat sparingly, and occasionally with a cut mess. They appear to give the sugar beet the preference.

My wife and daughters claim as perquisites all the poultry, eggs, surplus garden vegetables, &c., and a good business they make of it. I could not have believed that these resources would have proved so productive, and I am almost of opinion that a garden of four or five acres in the neighborhood of a fair market, would, if judiciously attended to, meet the necessary wants and expenditures of an ordinary family. This inference I draw from what has been accomplished by the female members of my family, without neglecting their domestic duties.

I experienced some difficulty in preparing

my roots for the cattle. I sent to New York for a turnep slicer, but it did not answer. We need a good root cutter—simple, cheap, and easily repaired if it gets out of order. I have one of Green's straw cutters—it is a good article, but too complex, and though it is in the end a great saving to any farmer or stock breeder, who will use it, yet the price at which it is held is an objection in the minds of some.

C. W.

Phila. Co. April 17th, 1839.

☞ Root Cutters simplified, a good article, Green's and also Willis' straw and hay cutters, with many other approved implements used in agriculture and horticulture, may be obtained at the Agricultural Ware-House and Seed Store, No. 87 North Second st., Philadelphia.—Ed.

The Sugar Beet.

To the Editor of the Farmers' Cabinet.

Sir,—Allow me to urge upon your numerous friends the expediency of sowing large quantities of sugar beet for the feeding of sheep and cattle of every description, during the *coming winter:* there is yet time to secure a full crop, and experience has abundantly testified that in no country in the world can this inestimable root be cultivated with such decided success as in this, "the country of the mocking bird," which cannot be reared but in *light* and *heat*—the two principles which go to make saccharine.

On looking over the report of the "Beet Sugar Society of Philadelphia," I perceive that a difference of six tons per acre, in the crops of beets grown in the neighborhood of *Douay*, is noted, when compared with those raised in the vicinity of *Arras*. This is accounted for by the circumstance of the soil of the former place being of a lighter and dryer nature, and consequently engendering a greater warmth of climate, which operates astonishingly in the culture of the crop, bringing it earlier to maturity, and adding greatly to its quality as well as quantity: but even there, seven pounds per root is an unusual occurrence—what shall we say then to those raised during the last season, of almost unprecedented drought, by our friends John and Jonathan Palmer (see p. 199 of the Cabinet) weighing 19¾ lbs.! Assuredly, the friends and patrons of the Institution, to whom we are indebted for the introduction of that valuable crop amongst us, must be satisfied that their labors have been, so far, abundantly successful.

But, allow me to introduce to your notice a young friend, who, a few years ago, purchased a very small place, upon which he resides in *affluence*, in the true sense of the word. His garden furnishes him with vegetables and fruit in the greatest abundance, and his little field yielded just sufficient food for his horse, until, on my recommendation, he broke up a part of it and sowed sugar beets, which flourished amazingly; and with care in the cultivation, and sowing the seeds of that root in every spare corner which he could find, he has been enabled to add a cow to his stock, which is, I calculate, about 100 per cent. in advance.—And I was delighted to find him busily employed, the last time I visited him, in what he called a work of creation—adjoining his garden was a waste spot, covered with stones and rubbish of every description, the accumulation of many years; and instead of cleaning it, at much labor and expense, he dug a ditch around it, and the earth which was thrown out, he carried over the surface, covering to a great thickness the weeds and stones and rubbish, which, if he had attempted to remove, he would have had no place in which to deposit them; thus making a virtue of necessity, and adding to his possessions sufficient space to grow an additional quantity of sugar beet, for the support of a heifer calf which he is rearing! The approach to his cottage is ornamented with a plantation of choice trees, which he keeps clean by digging with the spade, in preference to hoeing, and at his spring culture, he sows sugar beet amongst the trees, which come to great perfection; adding much to the benefit of the trees, by shading the surface during summer, and affording an extra earthing at the removal of the crop in autumn. Need I add my friend resides in one of the Eastern States? In this part of Pennsylvania and in New Jersey, the people are not so blest, they are not compelled to be so industrious—land is too plentiful and too cheap.

I conclude by observing, that if farmers would plant largely the sugar beet, we should have fat house lamb of 8 or 10 pounds per quarter in our markets, about Christmas, so fine as to be a real luxury on the table, instead of those little *nondescripts*, with skins on, which we see exposed for sale at the present time, and which appear to have been put out of existence on the principle of humanity, to save them from starvation! And if they *will* so busy themselves, I promise them a description of a fatting establishment near London, where lamb and veal and butter are made in winter at a profit which would astonish them! and this I will do by the time they have need of the information.

B. C.

P. S. A person informs me that on a late visit to the sugar districts in France, he was shown a small field, less than an acre, which had been rented for one year by a beet grower, for 260 francs=$52!

May 1st, 1839.

Agricultural Statistics.

The following statistics of the county of Susquehanna, are from an official report made to the Legislature of Pennsylvania, for 1838:

No. of farms	2768	Acres of Turneps	73
Acres of Wheat	5439	" Buckwheat	3546
" Rye	1624	" Flax	195
" Corn	3330	" Ruta baga	32
" Oats	8404	" Peas	320
" Meadow	34792	" Beans	83
" Potatoes	2367		

		Aggregate val.
No. of maple trees tapped	97,961	$23,512 64
Whole No. of Horses	3,998	195,025 00
Oxen	2,919	99,425 00
Cows	8,187	164,305 00
Sheep	51,600	84,101 00
Swine	9,033	12,800 00
Neat Cattle of all ages	22,746	454,920 00
Pounds of Butter sold	257,325	14,519 00
" Cheese sold	58,559	3,659 94

The average size of farms, 105 acres. Of barley 178 acres were raised in the county. Corn averaged 33 bushels per acre. Potatoes, 170 bushels per acre. The county has a surplus of oats, corn and potatoes. 193,783 lbs. of maple sugar were made, averaging 3 lbs. to a tree. The best crop of ruta baga on record in the United States, was raised in Choconut township, averaging on 3 acres more than 1200 bushels per acre. 342 tons of plaster were sown. Dr. Rose, of Silver Lake, has a large number of merino sheep, and sold 18,000 lbs. of wool, at 44 cts. per lb.

Green's Patent Premium Straw Cutter.

Fig. 38.

The *best Machine* ever known for cutting hay, straw, and all long feed for farm stock; *efficient, durable* and *cheap;* cutting faster and *with less power* than any other instrument yet invented.

The Albany Cultivator states, on the authority of an intelligent and worthy farmer, that two active men, will, with this machine, by the application of manual power alone, *cut five tons of hay per day!*

This invaluable implement has recently been so altered as to produce the following important effects:—1st. The frame has been greatly strengthened by the application of iron screwbolts in a new way. It is now *perfectly firm.* 2d. The knife cylinder has been so improved, that the No. 2 machine, which cuts feed three-fourths of an inch long, and which formerly cost $40, is now sold for $33, packing and drayage included. 3d. In the improved cylinder the divergency of the knives is so great, that the machine will cut cornstalks without choking.

Orders for this machine, which is fast cutting its way into universal favor, will be executed at our establishment (No. 87 North Second st. Phila.) with promptness and fidelity.

From the N. H. Farmers' Monthly Visitor.

The following communication is from a *practical* farmer of the adjacent town of Canterbury. If we do not mistake, the discovery and remedy he has here developed in relation to the *weevil* or *grain worm*, so destructive to the wheat grower's prospects, will be of more value to the public than all the combined discoveries and efforts which have been exhibited in the essays of the best scientific writers of the country.

On the Culture of Wheat. Important Discovery and Remedy for Weevil, or Grain Worm.

In order to prepare the soil for a good crop of wheat, very much is depending on ploughing, as well as manuring the ground. A few years since, I made the experiment by ploughing a piece of ground four or five times, before I sowed on it one peck of red bearded wheat, and when the wheat was grown about four or five inches high, I sowed half a bushel of slaked lime and plaster, well mixed, upon the wheat early in the morning, while the dew was on, which gave it a white appearance for a few following days. It soon changed to a dark, lively green, and grew freely and filled well, so that it produced seven bushels of good wheat, clean from smut and almost every thing else but wheat, and that of an excellent quality. But on three bushels sowing in the ordinary way of ploughing but once in the spring, and sowing no plaster nor lime, I got but about twelve bushels to one bushel sowing.

The last spring (1838) I sowed ten bushels, lacking four quarts of wheat, of which one bushel and twelve quarts was what is called Tea wheat, half a bushel was the old red bearded wheat, and all the residue of the seed was what goes by the name of Black Sea wheat. About three acres of ground was pasture land, the rest was tillage, which the year before was well manured, and produced corn and potatoes, except the pasture land, of which a part was planted with corn and part with potatoes, and had no manure at all, and was badly hoed on account of being very hard and rocky, but was ploughed in the fall and three times in the spring before sowing. The other old ground was ploughed twice in the spring before sowing. The wheat was all washed clean and drained off the water. Then I added an equal quantity of lime and plaster as much as would stick to it, and sowed four bushels and a half of clean seed, (meaning before prepared as

lime and plaster,) upon three acres of pasture land of Black Sea wheat; and I sowed three bushels and a half of Black Sea wheat, prepared in the above mentioned way, upon about one acre and five-eighths of ground; and the one bushel and twelve quarts of Tea wheat I prepared and sowed as above, upon about one acre and one-eighth of an acre of land; and the half bushel of red bearded wheat was prepared and sowed as above, on about one quarter of an acre of land.—The Tea wheat and Black Sea wheat upon the old ground were sowed on the thirteenth and fourteenth days of April; the half bushel of red bearded wheat was sowed about the middle of May; *the four and a half bushels upon the pasture land, on the thirtieth day of May;* and upon this piece of pasture land I sowed mixed lime and plaster about four bushels, when the wheat was about one foot high.

On the first day of July, I discovered a few of the yellowish flies, or what are called weevils, at or a little before sunset; and finding them to be very active, I felt desirous to find out how they performed so much mischief. So I put on my glasses and saw them climb up the head of wheat and when at the upper part of the hull which covers the kernel when grown would make a small stay, putting their tail or sting under the upper edge of the hull, while, to appearance, the fly would push back, and that instant fluttering the wings, making a stop of but a few seconds, and then hastening towards the top of the head, making his short intervals at the upper part of each hull as he passed upward. Upon the second day there was a considerable increase of these flies upon the wheat heads early in the morning, and again towards evening, busily performing in the same manner as on the first appearance. The third day they had much increased from what they were the day before; and having heard that lime sown upon the wheat would be of service, I immediately threw on about one bushel of slaked lime upon the wheat while it was wet with dew, upon about a half an acre of the wheat. The fourth day morning, I again visited this piece of wheat where I sowed the lime, and upon a careful examination, I found but one weevil or fly upon the wheat, until I came where I had sowed no lime, where, to my surprise, I believe there were as many as a dozen of those yellowish flies upon every head of wheat. This discovery caused me immediately to commence sowing on more lime, and not having enough to finish the piece, I then had recourse to ashes, which I threw on in much haste, fearing that these insects, being then so active and numerous, would entirely destroy our wheat crop. The fifth day morning, I again carefully examined our wheat, and found only three of those flies, which on the fourth inst. were so very numerous. Upon the sixth day, as before, I examined carefully, and found none; neither did I see any of those flies afterwards.

The wheat sown upon the pasture land on the thirtieth of May, not being headed until after the departure of those unwelcome visiters, they had no opportunity of injuring any part of it. After reaping and threshing, I winnowed up. Beginning at the half bushel of red bearded, which had no lime sown upon it, I had only two bushels, it being almost entirely destroyed by the weevil. Of the Tea wheat, which grew from one bushel and twelve quarts, I cleaned up twenty-two bushels. From the three bushels and a half of Black Sea wheat, I cleaned up fifty-three bushels of good wheat, of a round full kernel. From the last sown piece upon the pasture land without manure, I cleaned up sixty-two bushels and a half of wheat: this was not quite so plump and full as I have seen, on account of the drought, which, in all, amounts to one hundred and thirty-nine bushels and a half.

SAMUEL TALLANT.

Canterbury, March 8th, 1839.

[The reader will bear in mind that in this latitude the season is usually from two to four weeks in advance; so that we prepare our ground and plant much earlier than our brother farmers in New Hampshire.]

Science must combine with practice to make a good farmer.

For the Farmers' Cabinet.

Essays on Agriculture.

No. IV.*

MAGNESIAN EARTH.

In a former communication, on the character of the earths chiefly concerned in the production of vegetation, I took occasion to remark that magnesian earth was so limited in its extent, that a passing notice of its existence would be sufficient. The circumstance, however, of its being so frequently found in combination with lime in its mineralized state, and consequently in its application in agriculture, it would probably be necessary to take such a brief notice of some of its properties as will justify forming correct conclusions respecting its practical effects. It is a metallic substance, called magnesium, which combines with oxygen gas with avidity, forming an oxide of magnesium; with water it forms a hydrate, which, by a union with carbonic acid gas, becomes a carbonate of magnesium—like lime, it is usually found in a state of carbonate, and, like lime, the carbonic acid may be separated by heat; thus far they appear to possess very similar properties.—They differ, however, very materially in their agricultural effects. Their operation can only be understood from a knowledge of the constituents of the food of plants. Lime may, probably, be considered as one, as it and carbon appears to form the principal part of all vegetables. Magnesia has very rarely, if ever, been discovered in vegetables—consequently cannot be considered as an essential of their food, or calculated to promote vegetation. Hence its application may prove pernicious to a certain extent by combining with as much, or more, carbonic acid than the same quantity of lime would require to prepare it to be taken up by the absorbents, and thrown into the general circulation to promote their growth. From what has been said, it appears that the use of magnesia in agriculture is unpleasant, inasmuch as the purchase-money paid for a worse than useless substance is entirely lost. Its effects are pernicious by absorbing and retaining carbonic acid, thereby depriving vegetation of so much carbon, which would otherwise have been furnished to promote vegetation. When magnesium becomes saturated with carbonic acid, it is necessarily rendered inert, and ceases to produce any further active effect on vegetation.

JOSEPH CLOUD.

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* The preceding essays, or numbers, may be found on the following named pages of the Cabinet. No. I. General Remarks, page 169. No. II. Earths and Soils, page 202. No. III. Lime, page 233. Hereafter the articles from Mr. Cloud will appear under the general head of Essays on Agriculture.

For the Farmers' Cabinet.

Indian Wheat or Buckwheat.

My crop of buckwheat amounted to almost a failure last year; and from some cause or other it has been falling off for some considerable time back. This has made me very anxious to get some of the new or Indian buckwheat, of which I read a favorable notice in the Cabinet last year. Please inform me, as early as may prove convenient, where it may be obtained, and at what price; and if you would make the information public through the Cabinet, it would doubtless oblige many who are in my situation. P. W. M.

Brandywine Manor, April 29, 1839.

Note.—We do not know where the article inquired for can be obtained—not probably in this region. But as there is time sufficient to plant, we will, if it is the wish of our correspondent, endeavor to procure a supply from the North. Of this article we have no personal experience, and from all the information we have been enabled to gain concerning it, we would not urge its culture on our friends. It is true, that the yield is much greater than of the common sort, *Polygonum*, but the quality is very inferior, and of course it is much less nutritious. It has been cultivated in some of the northern counties of this State.

The buckwheat failed as a crop generally last year. But this ought not to discourage its cultivation. Every farmer should put in an acre or two. It does best in light soil—may be sown in this latitude from the first of May to about the 10th of July. From half a bushel to three pecks of seed are sufficient. Buckwheat straw is strongly recommended by some gentlemen as affording the very best of hay for milch cows, and therefore worthy of special care in its preservation.

Put in the Turneps.

As our farmers will soon commence putting in their turneps, we beg leave to call their attention to the method of raising them successfully, as adopted by Mr. Samuel W. Smith. His statement, which is very minute and interesting, may be found on the 17th page of the present volume of the Farmers' Cabinet. The stock farmer should not neglect the planting of an acre or so for his cattle.

PUMPKINS, &c.

The cultivation of the pumpkin will not be overlooked by the careful farmer—it is an indispensable article in the family, very nutritious, and when raised in quantities, which may be easily done, (and it does not greatly exhaust the soil,) is a pleasant and agreeable change for cattle, especially milch cows.—They are highly recommended for fatting cattle, are easily raised and gathered without much trouble, less perhaps than that attending any other crop. Pains should be taken to grow the *best kinds*. Pumpkins, as well as sugar beets, are frequently raised between alternate rows of corn.

The CITRON PUMPKIN, or *Valparaiso squash* as it was formerly called, in point of excellence, stands at the head of the whole tribe, and we are happy to learn that its cultivation is extending. For a particular account of this prince of the pumpkin family, see Farmers' Cabinet, Vol. II., page 252. In addition to its many good properties, it may be easily preserved throughout the year. We have seen them, 18 months after being gathered, as fair and sound as the day they were taken from the vine, and they retain their richness and flavor unimpaired.

PARSNEPS AND BEETS

Do best in a rich, loamy soil, and may be planted any time during the present month. Dont be miserly of your manure, apply it with a liberal hand, and your prospects of a good crop will be greatly enhanced. The dairy farmer who has had a supply of this grateful and nourishing food for his cattle, during the inclement months of winter and spring, is alone capable of estimating the vast importance of the culture.

THE LAST CALL.—If any farmer has neglected to put in an acre or two of sugar beet and mangel wurtzel, for the keep of his stock on a delicious green food during the short days and long nights of next winter, let him go to work forthwith and put in a supply of ruta baga, and he may partially retrieve his error. In such cases, though we by all means prefer and recommend earlier planting, we would urge the culture of an acre of sugar beet. We had a conversation to-day, (April 30) with an esteemed and intelligent farmer from old Bucks, on agricultural subjects, and we inquired what he thought of the root culture; he replied that he raised roots in quantities for his cattle for three years past, and the last year he added one acre of sugar beets. We asked the result. His reply was, my cattle keep in excellent order. The produce of my dairy is considerably increased, and the quality of the butter is improved. "Well," we continued, "have you put in your beets?" "Yes indeed, if I should neglect this part of my duty, I should never dare to look one of my cows in the face."

Cultivation of Water-Melons.

This delicious melon may be cultivated for an early market in the following manner:

Select a high, and dry soil for the purpose. Plough it up well, and harrow it. Check off the spot thus treated at distances of ten feet each way. Dig out each check with a hoe or spade, and into the same place five or six quarts of cotton seed; or if this cannot be procured, fill the same with stable manure, partly decomposed. Haul over this the earth before dug from the hole, and mix it well with the manure. If you have used cotton seed, in the spring, it will have sprouted a week or two

after being put into the hole; and must now be killed by chopping up the same well, and mixing it with the soil. This being done, you may now haul up the manure and earth as before directed, into hills; on the top of which you must place about a peck of sand, taken from some street or well traveled road. Your hills will be now ready for planting. I should, however, state that the hills must, instead of being made high, be made flat and broad.

Soak your seed over night in milk warm water, and plant out the same the next morning, placing from five to six seed to each hill. The seed must not be covered more than one inch or two under ground. Water the hills for a few days until the seed has sprouted, and then leave the plants to run.

As soon as the plant has got six leaves, take off the centre plant with a sharp penknife, and when the lateral shoots are six inches or a foot long, take off all but three. When the shoots, thus left, begin to run to the ground between the hills, stake them down with a small cross stick.

As the vines begin to branch, at every three or four feet, where the vine branches, put a shovel full of rich earth over the same, and press it down lightly with the foot. Wet weather should be selected for this operation, and by so doing the vines will never fail to take where they have been set. The spaces between the hills should be kept free of grass —and by following the above directions, large melons will be produced.

From a quarter acre of land thus treated, more melons will be made than from four times the amount as usually cultivated.—*Southern Agriculturist.*

Culture of Potatoes.

Messrs. Editors:—As there is a diversity of opinions among farmers respecting the culture of potatoes, and particularly the seeding, I am induced to say a few words, and if you think them worth noticing, you can make them public.

First. What kind of seed is best! I have experimented more or less for fifteen years, and am convinced in my own mind, that large potatoes, cut once or twice, are the best.—Since adopting this method, I have got much the largest crops, and my potatoes do not diminish in size or quality. June 4th, 1835, I planted one acre of pasture ground; carted on 15 loads of coarse manure; harrowed it well, and planted, on the 7th, 23 bushels of potatoes,—the large ones cut lengthwise, and those of middling size were dropped whole; the rows 3½ feet apart, the potatoes dropped from 18 to 24 inches apart. I had but one acre, and the product was four hundred and twenty-five bushels.

In 1836, the same ground was planted to corn, and the crop was light; ten loads of dressing spread. In 1837, I sowed two bushels of bald wheat, and harvested 41 bushels of wheat. In 1838 my hired man judged there was at least three tons of hay from the above mentioned acre.

Excuse my leaving the subject; and to return; my crops of potatoes for five years have been from three to four hundred and twenty-five bushels to the acre. In 1838, I planted 1¼ acres in potatoes. The ground was broken up in the fall of 1835, and the next spring cross ploughed, harrowed and sowed in wheat, with 10 lbs. of clover seed. The product over 30 bushels to the acre. After the wheat was harvested, 10 common loads of old manure was spread, and in 1837 sowed in wheat again; the product was 28 bushels per acre. In 1838, fifteen loads of manure was evenly spread; cross ploughed, harrowed, and 23 bushels of potatoes planted similar to the first mentioned acre. The product was 500 bushels.

I cover my potatoes quite shoal, not more than one to two inches deep. Generally plough and hoe twice, and hill up but little. The ground should be as light as possible about the hill. I am satisfied that spreading manure is better than putting it in the hill.—*Maine Farmer.*

Guilford, April 1st, 1839.

As the season is approaching when many farmers require a pleasant beverage, we beg leave to present the following receipt. It is one that we have tried, and can recommend. If the proportions are duly observed it will prove very superior.

For Ginger or Chinese Beer.

Four ounces Jamaica Race Ginger—1½ oz. cream of tartar—the juice and rind of two common sized lemons—five pounds of *good* sugar. Add the above ingredients to five gallons of boiling water; let it stand 12 hours, and then strain through a fine cloth. To this add one bottle of old porter, and bottle in stone ware or champagne bottles. In two days it will be fit for use. ☞ Try it.

Homminy Pudding.

An excellent pudding may be made as follows: Take half a pint of fine homminy, soak it one night; in the morning boil it two hours, and then proceed the same as in making a rice pudding. The addition of an egg or two improves it.

In business, the keeping close to the matter procureth despatch; and true despatch is a rich thing.

Office of the Cabinet removed to No. 87 North Second street.

Quantity of rain which has fallen in each month since January 1, 1839.

	Inches.
1st month,	5.03
2d month,	3.42
3d month,	1.05
4th month,	1.05

Philadelphia Hospital, 5th mo., 1st, 1839.

"An Essay on Agriculture, read by the late Dr. Joseph Cloud, before the Chester County Cabinet of Natural Sciences," will be published in our next.

To the Patrons of the Farmers' Cabinet, and the friends of Agriculture generally.

The subscriber, from the earliest period of his connexion with the Farmers' Cabinet, has been convinced that the interest of the agricultural community required an establishment in this city, for the exhibition and sale of *tools, implements*, and *machinery* used in the various departments of agriculture and horticulture, especially those of *new* and *improved patterns*. He therefore takes great pleasure in informing the public that he has formed a business connexion with the Messrs. Prouty, gentlemen who have been for some years successfully engaged in the manufacture and sale of improved implements in a neighboring city, and that they have opened an Agricultural Ware-House, at No. 87 North Second street, a few doors above Arch street, Philadelphia. Their assortment of Tools and Seeds, now on hand, will be increased, and no effort will be wanting to render the establishment deserving a share of public patronage.

John Libby.

Agricultural Ware-House and Seed Store.

For sale by Prouty, Libby & Prouty, 87 North Second st. Phila. a large assortment of Tools and Implements used in Agriculture and Horticulture, of the most approved patterns. Also a good assortment of Seeds, among which are the Ruta Baga, Mangle Wurtzel, and genuine French Sugar Beet. ☞ Citizens, and gentlemen who visit the city are requested to call and examine. Orders will be promptly attended to.

Prices Current—May 6.

FLOUR, PER BARREL.

Pennsylvania and Brandywine	$7 12 a 7 37
Western	7 00 a 7 25
Scraped	0 00 a 0 00
Middling	5 00 a 5 25
Rye Flour	5 25 a 5 37
Corn Meal	3 62 a 4 00

GRAIN, PER BUSHEL.

Wheat, Pennsylvania	$1 62 a 1 66
—— Southern	1 60 a 1 65
Rye, Penna	1 08 a 1 10
—— Southern	1 06 a 1 12
Corn, Penna. round yellow,	90 a 93
—— Southern, yellow	90 a 91
—— White	88 a 89
Oats, Penna	55 a 57
—— Southern	51 a 53
Barley, Eastern	75 a 85
—— Penna	0 00 a 0 00
Peas	1 75 a 2 00
Beans, white	1 75 a 1 85

PROVISIONS.

Beef, mess, (new)	$15 50 a 16 00
—— prime	13 50 a 14 50
Pork, mess	21 50 a 22 50
—— prime	18 00 a 19 00
Bacon, western, per lb	10 a 11
Hams, Jersey	14 a 15
—— Western	12 a 12½
Butter, extra keg, No. 1	14 a 16
Cheese, country	10 a 11
Lard, western	11 a 12
Philadelphia	11 a 12
Jersey	12½ a 13½

WOOL, PER POUND.

Prime Saxony	58 a 61
American full blood	52 a 57
——— ¾ blood	45 a 50
——— ½ blood	40 a 45
——— ¼ blood and common	35 a 40
Lamb's sup. pull	47 a 53
Do. Nos. 1, 2, and 3.	33 a 46
Hay, Timothy, per 100 lbs	85 a 95
Clover	75 a 85
Hops, per lb. 1838, prime	16½ a 17½
Clover Seed, per bushel (best Penna.)	12 00 a 13 50
Flax Seed, rough	1 77 a 1 78
Timothy Seed (best)	2 25 a 3 75
Herd Grass, or Red Top	0 00 a 0 00
Orchard Grass	2 00 a 2 50
Sumac, American, per ton	35 00 a 37 50
Tallow, American, per lb	12½ a 12½

NEW YORK—May 4.

Flour, per barrel	$7 12 a 7 62
Wheat, per bushel	1 65 a 1 75
Corn, per bushel	90 a 92
Rye, per bushel	1 08 a 1 10
Oats per bushel,	46 a 53

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